

THE FRAUDULENT FRIEDMANS

THE BACON CIPHERS IN THE SHAKESPEARE WORKS

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To anyone with real cryptological experience it is hard to reconcile the impartiality claimed by the authors with the skill and legerdemain by which certain danger-points have been avoided. It is these unexpected manipulations which have led me at times to suspect a “command performance”...[in] what is admittedly a very clever “plant”...The professional status of a modern cryptographer does not necessarily fit him to pass judgement on the subtle cryptology of a secret society of the past.

The book, granted, does away with the fanciful work of some amateur cryptologists, an easy task, an empty triumph. But, having thus gained the confidence of the readers, the authors deceive them by “Scientific” demonstrations which they know to be false.

[Professor Pierre Henrion, ‘Scientific Cryptology Examined’, *Baconiana*, Vol. XLIII, No 160 March 1960, pp. 43-63, at pp. 43-4, 47; Vol. LXVI, No. 183, December 1983, p.76]

The frankly shocking “legerdemain” of the Friedmans, who unquestionably knew exactly what they were doing....stooped to the very lowest kind of intellectual dishonesty...In truth, this book is probably the most astonishing collection of deceit and deliberately calculated falsifications that have ever been crammed between the covers of a book...I can only believe that some person or organization with a vested interest in the perpetuation of the Stratfordian myth commissioned the Friedmans to write [it].

[Kenneth R. Patton, *Setting The Record Straight: An Expose of Stratfordian Anti-Baconian Tactics...In Elizebeth S. and William F. Friedman’s The Shakespearean Ciphers Examined* (2000), pp. 5, 8, 13]

...at a subsequent meeting in London, *a trios*, Pares had demonstrated the ciphers at the conclusion of Camden’s *Remaines* without contradiction from the Colonel [Friedman] and to the complete satisfaction of the Cambridge Professor of Mathematics, who was the third party involved. In addition we understand from Group Captain F. Winterbotham, author of *Ultra Secret*, that Friedman admitted to him that he had been wrong to condemn all Baconian ciphers.

[Noel Fermor, *Baconiana*, Vol. LX, No. 177, November 1977, p. 76]

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FRANCIS BACON FROM HIS EARLY YEARS TO HIS LAST DAYS: A LIFE IN CIPHERS

The fairest, and most correct Edition of this Book in *Latine*, is that in Folio, printed at *London*, Anno 1623. And whosever would understand the Lord *Bacon's* Cypher, let him consult that accurate Edition. For, in some other Editions which I have perused, the form of the Letters of the Alphabet, in which much of the *Mysterie* consisteth, is not observed: But the *Roman* and *Italic* shapes of them are confounded.

[Thomas Tenison, ed., *Baconiana. Or Certain Genuine Remaines Of Sir Francis Bacon* (London: printed by J. D. for Richard Chiswell, 1679), pp. 27-8]

And those who have true skill in the Works of the Lord *Verulam*, [Lord Bacon] like great Masters in Painting, can tell by the *Design*, the *Strength*, the *way of Colouring*, whether he was the Author of this or the other Piece, though his Name be not to it.

[Thomas Tenison, ed., *Baconiana. Or Certain Genuine Remaines Of Sir Francis Bacon* (London: printed by J. D. for Richard Chiswell, 1679), p. 79]

When he perceived that the arts were held by no roots, and like seed scattered on the surface of the soil were withering away, he taught the Pegasean arts to grow, as grew the spear of Quirinus [Spear/Spearman: i.e. Shakespeare] swiftly into a laurel tree. Therefore since he has taught the Heliconian goddesses to flourish no lapse of ages shall dim his glory. The ardour of his noble heart could bear no longer that you, divine Minerva [Pallas Athena the Shaker of the Spear who wore a helmet which rendered her invisible] should be despised. His godlike pen restored your wonted honour and as another Apollo [leader of the Nine Muses presiding over the different kinds of poetry and liberal arts] dispelled the clouds that hid you.

[The poet/dramatist Thomas Randolph in *Memoriae Honoratissimi Domini Francisci, Baronis De Vervlamio, Vice-Comitis Sancti Albani Sacrum*, ed., Dr William Rawley (Londini: In Officina Johannis Haviland, 1626), p. 29]¹

It was the destiny of the great statesman Francis Bacon to hold the helm of the state in his hands and oversee its twin pillars of government and the English Secret Service. He was born in secrecy the concealed royal child of Queen Elizabeth and the favourite Robert Dudley, Earl of Leicester.² It was his good fortune to be raised on her behalf by the Lord Keeper of the Realm and *de facto* Lord Chancellor of England Sir Nicholas Bacon and his seriously learned wife Lady Anne Bacon, fluent in Greek, Latin, Italian and French, and along with her other renowned and celebrated Cooke sisters, part of a vast clandestine Pan-European Protestant network of theologians, philosophers, poets, dramatists, writers, printers, publishers, spies and intelligencers. Her elder sister Lady Mildred Cooke Cecil was married to the most powerful man in the kingdom Principal Secretary of State Sir William Cecil who with his brother-in-law Sir Nicholas Bacon, the Grand Architects of the Elizabethan Reformation, ran and oversaw a large foreign and domestic network of spies and intelligencers to maintain the national security of the kingdom and for the personal protection of its head of state, Queen Elizabeth.

By definition the English secret state and what became the English Secret Service was governed by strict secrecy. The lifeblood of intelligence and information was the arcane art and science of codes and ciphers and other forms of secret writings. With this in mind in early 1563 Sir William Cecil directed Dr John Dee tutor and mentor at

various times to Queen Elizabeth and Lord Robert Dudley, and afterwards mentor to a young Francis Bacon, to seek out a rare manuscript copy of Johannes Trithemius's *Steganographia*. The spy, intelligencer and secret government agent Dr John Dee, had a profound and extensive interest in cryptology and in a letter written to Cecil from Antwerp dated 16 February 1563 he informs him that he had eventually tracked down a prized manuscript of *Steganographia* and had spent the last ten days in continual labour making a copy of it:

Yt may pleas you to understand, that already I have purchased one book, for w^{ch} a Thousand Crownes have ben by others offred, and yet could not be obteyned. A boke, for which many a lerned man hath long sowght, and dayly yet doth seeke: Whose use is greater than the fame thereof is spred: The name thereof to you is not unknowne: The title is on this wise, *Steganographia Joannis Trithemis*: whereof in both the editions of his *Polygraphia*, mention is made, and in his epistles, and in sundry other mens bokes: A boke for your honor, o^r a Prince, so meet, so nedefull and comodious, as in humayne knowledg, none can be meeter, or more behofefull. Of this boke the one half, (with contynuall Labor and watch, the most part of x dayes) have I copyed oute. And now I stand at the Curtesye of a nobleman of Hungarie, for writing furth the rest: who hath promised me leave therto, after he shall perceyve that I may remayne by him longer (with the leave of my prince) to pleasure him also with such points of Science as at my hands he requireth.³

The German Renaissance polymath Johannes Trithemius (1462-1516) was one of the founding fathers of modern cryptography. He wrote the first published work on the subject entitled *Polygraphia* which appeared in 1518. He had started his work on his *Steganographia* ('Covered Writings') in 1499. He sent a letter to his friend Arnoldus Bostius, a Carmelite monk in Ghent, in which he says 'I have a great work in hand that, should it ever be published (which God forbid), the whole world will wonder at.'⁴ Unfortunately Bostius died before the letter arrived but it was read by the abbot who publicized it in an attempt to decry Trithemius. The situation was further exacerbated when in 1500 Trithemius was visited by Carolus Bovillus who later said in a letter to the Royal Counsellor Germain of Ghent 'I hoped that I would enjoy a pleasing visit with a philosopher; but I discovered him to be a magician.' After spending a couple of hours reading the *Steganographia* the shocked and outraged Bovillus 'threw it away on the spot because such great wonders and such barbarous and strange names of spirits-not to say devils-had begun to terrify me.'⁵ In addition, to the manuscript copy of the *Steganographia* Dr Dee owned several copies of *Polygraphia*. He also studied Jacques Gohorry's *De Usu et Mysteriis Notarum* and Jacopo Silvestri's *Opus Novum* which he used to practice writing in cipher.⁶

On the face of it the three books of the *Steganographia* appears to the untrained eye and mind to be about various forms of magic. When it was first published at Frankfurt in 1606 it appeared with a shorter appendage called the *Clavis* (the key). The *Clavis* showed Books I and II were not about magic rather it was a work of concealed cipher systems; in other words, a work of steganography, the practice of secretly concealing a hidden message within another overt message. The *Clavis* did not include a key for Book III and for centuries it was almost universally believed to be solely about magic. W. E. Heidel claimed to have discovered its true purpose in 1676 but he published his results in the form of a series of equally indecipherable cryptograms, so his claim has never been independently verified. It was near the end of the twentieth century before Book III was deciphered by the German Thomas Ernst and confirmed by Jim Reed working in the Mathematics and Cryptography Research Department at AT&T a few years later.

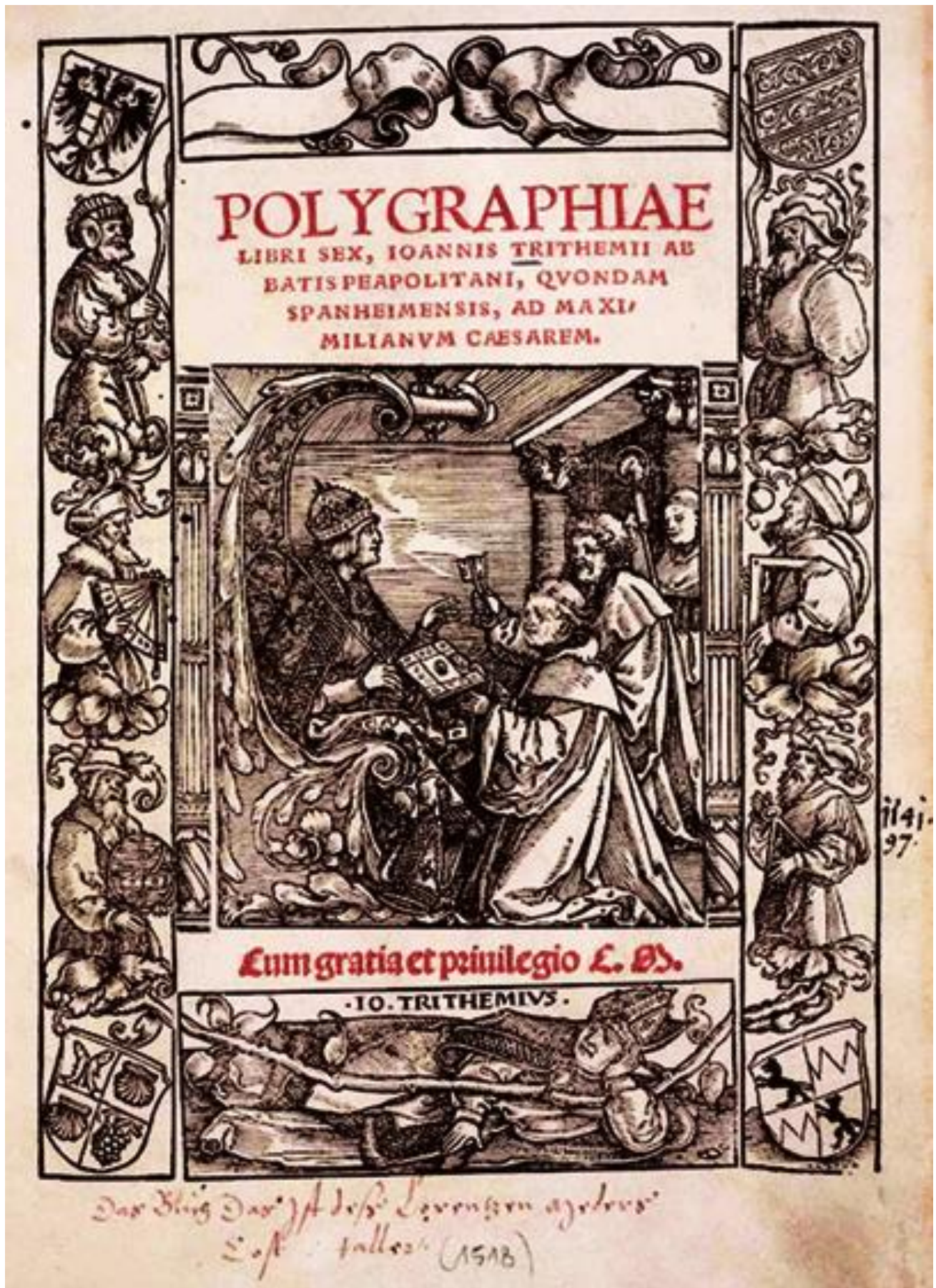


Fig. 1 The title page of Johannes Trithemius's *Polygraphia* (1518)

STEGANOGRAPHIA:

Hoc est:

ARS PER OC-
CVLTAM SCRI-
PTURAM ANIMI SUI VO-
LUNTATEM ABSENTIBVS

aperiendi certa;

AVTHORE

REVERENDISSIMO ET CLARISSIMO VIRO,
JOANNE TRITHEMIO, Abbate Spanbaimensi, &
Magiz Naturalis Magistro per-
fectissimo.

PRÆFIXA EST HVIC OPERI SVA CLAVIS, SEV
veratitro luctio ab ipso Authore concinnata;

HACTENVS QVIDEM A MVLTIS MVLTVM DESI-
derata, sed à paucissimis visa:

Nunc vero in gratiam secretioris Philosophiz Studiosorum
publici iuris facta.

Cum Privilegio & consensu Superiorum.



FRANCOFVRTI,

Ex Officina Typographica MATTHIE BECKERI, Sumptibus
IOANNIS BEERNER.

Anno M. D. C. V. I.

Fig. 2 The title page of Johannes Trithemius's *Steganographia* (1606)

Ernst discovered that Book III of *Steganographia* did indeed contain various cipher systems proving it was a work of cryptography and not of angelic or black magic.⁷

With the copied manuscript of Trithemius's *Steganographia* Dr John Dee returned to England to show Principal Secretary of State Sir William Cecil and his brother-in-law Lord Keeper and *de facto* Lord Chancellor of England Sir Nicholas Bacon his prized possession. All three of them were aware that together with the *Polygraphia* these two works on cryptology (codes and ciphers) would prove to be important weapons in maintaining the national security of the kingdom.

The great mathematician and expert in codes and cipher Dr Dee came into contact with his young protégé Francis Bacon at a very early age. Dr Dee was most probably privy to the secret that Bacon was the secret royal son of Queen Elizabeth and Robert Dudley, Earl of Leicester with both of whom he had a long relationship and of course moved in the same government and court circles as his patron Sir William Cecil and his brother-in-law Sir Nicholas Bacon. The young Francis spent his youth growing up at York House the official residence of his father the Lord Keeper of the Great Seal which stood adjacent to the grounds of York Place (now known to us as the Palace of Whitehall containing government building including the Cabinet Office and Ministry of Defence, an arm of British Intelligence), Queen Elizabeth's Palace, the residence of English monarchs from the early sixteenth century. The prodigious Francis grew up at court with its throngs of foreign ambassadors, diplomats and intelligencers, and all the leading figures of the English establishment, its government, various secret agents and other members of the Tudor spy network overseen by his uncle Sir William Cecil, his father Sir Nicholas Bacon and spymaster Sir Francis Walsingham. Like everyone else at court, its senior spy and expert on codes and ciphers Dr Dee, was familiar with the precocious intellect of his young protégé described by Queen Elizabeth as her young Lord Keeper, whose dazzling intellect truly astonished all those who crossed his path:

*His first, and childish, years, were not without some Mark of Eminency; At which Time, he was endued, with that Pregnancy and towardness, of Wit; As they were Presages, of that Deep, and Universall, Apprehension, which was manifest in him, afterward.*⁸

These are the pregnant words of his first English biographer Dr William Rawley (who lived with Bacon for the last ten years of his recorded life) followed by the equally coded words of his other early biographer David Lloyd:

He had a large mind from his father, and great abilities from his mother; his parts improved more than his years: his great, fixed, and methodical memory, his solid judgment, his quick fancy, his ready expression, gave high assurance of that profound and universal knowledge and comprehension of things which then rendered him the observation of great and wise men, and afterwards the wonder of all...**At twelve, his industry was above the capacity, and his mind above the reach of his contemporaries.**⁹

As with his hero and mentor Dr Dee, part of Francis Bacon's prodigious apprehension in those early years was his deep love and fascination with codes and ciphers which was manifestly evident afterwards and formed a large part of his life and reputation to posterity concerning the various Baconian cipher systems found in his Shakespeare poems and plays. The first recently discovered use of secret encipherment by Francis Bacon in an impressive piece of dramatic literature written when he was only seven years old, later found echo down the decades via similar usage of ciphers, anagrams and acrostics in his Shakespeare poems and plays up to and including the Shakespeare First Folio.¹⁰

The first play written by Bacon when he was only seven years old was registered on the Stationers' Register in September 1568 'Recevyd of John alde for his lycense for prynting of a play *lyke Wyll to lyke quod the Deuell to the Collyer ...iiij^d*'.¹¹ It was first printed towards the end of 1568 by the printer John Allde to give it its full title as *An Enterlude Intituled Like Wil to Like quod the Deuel to the Colier, very godly and full of pleasant mirth. Wherin is declared not onely what punishment followeth those that wil rather followe licentious liuing, then to esteem & followe good counsell: and what great benefits and commodities they receiue that apply them unto vertuous liuing and good exercises*. Written behind the literary mask of Ulpian Fulwell it commences with the name of Lady Bacon's favourite author Cicero in its first important six lines (3+3=6: which when the numbers 3 and 3 are placed together they yield 33 Bacon in simple cipher) in its first paragraph as follows:

Cicero in his book de amicitia these woords dooth expresse,
 Saying nothing is more desirous then like is unto like
 Whose woords are moste true & of a certaintie doutles:
For the vertuous doo not the vertuous company mislike.
But the vicious doo the vertuous company eschue:
And like wil unto like, this is moste true.¹²

It will be observed that the first letters commencing the first six lines are **C, S, W, F, B, A** which form an anagram. Due to the deliberate formatting four letters **F BAC** are separated by the indenting of the other two lines. If we rearrange the four letters they alone spell out **F BAC** evidently a contraction of F. Bacon. Yet there is no need even for this contraction. The other two letters required to spell out F. Bacon the **O** and **N** are printed next to the F and A in the fourth and sixth lines respectively so here we have **F. BACON** in full The other two remaining letters W and S which numerically represent the equivalent of 21 and 18: 21+18=39 F. Bacon in simple cipher. The first line (not including 'de amicitia' which is in different type) comprises 39 letters again F. Bacon in simple cipher and the last line 33 letters Bacon in simple cipher which is the sixth line: 33+6=39 F. Bacon in simple cipher. The six line paragraph contains 56 words Fr. Bacon in simple cipher. The whole page itself comprises the header 'The Prologue' and 32 full lines of text: 1+32=33 Bacon in simple cipher.

A B C D E F G H I K L M N O P Q R S T U W X Y Z
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
B A C O N F. B A C O N F R B A C O N
2 1 3 14 13=33 6 2 1 3 14 13=39 6 17 2 1 3 14 13=56

The central character of *Like Will To Like Quod the Devil to the Collier* is Newfangle the Vice whose Godfather was Lucifer the Devil. The play has a very colourful cast of characters, on the evil side Tom Tossplot, Ralph Roister and Pierce Pickpurse and on the side of goodness Virtuous Life, Honour and Good Fame. The central theme of the play is the dichotomy of good and evil explored through its characters and through the different colours of good and evil the very title of a work by Bacon that later appeared in the first printed publication with his name on the dedication page.¹³ From his early days until his last the subject of good and evil deeply fascinated his profound intellect. Over the period of his lifetime Francis assembled a very large number of what he calls 'Semblances or popularities of good and evill with their regulations for deliberacions'

The Prologue.

Licero in his book de amicitia these words dooth expresse,
 Saying nothing is more desirous then like is unto like
 Whose words are most true & of a certaintie doubtless
 For the vertuous doo not the vertuous company mislike,
 But the vicious doo the vertuous company eschue:
 And like wil unto like this is most true.

It is not my meaning your eares for to wery,
 With harkening what is the effect of our matter:
 But our pretence is to mooue you to be mery
 Merely to speak meaning no man to flatter,
 The name of this matter as I said while ere:
 Is like wil to like quoth the Deuel to the Colier.

Sith pithy prouerbs in our Englishe tung dooth abound
 Our authour thought good such a one for to chuse:
 Is may the good example and mirth may eke be found,
 But no lasciuious toyes he purposeth for to vse,
 Heer in as it were in a glasse se you may:
 The aduancement of vertue of vice the decay.

To what ruin ruffians and roisters are brought,
 You may heer se of them the small end
 Begging is the best though that end be nought,
 But hanging is worse if they doo not amend.
 The vertuous life is brought to honour and dignitie:
 And at the last to everlasting eternitie.

And because diuers men of diuers mindes be,
 Some doo matters of mirth and pastime require:
 Other some are delighted with matters of grauitie,
 To please all men is our authours cheef desire.
 Wherefore mirth with measure to sadnes is annexed:
 Desiring that none heer at our matter wil be perplexed.

Thus as I said I wil be short and brief,
 Because from this dump you shall releued be:

A.ii.

And

Fig. 3 The ciphered first page of Bacon's first play *Like Will To Like* (1568)

in his *Promus of Formularies and Elegancies* (his private-notebook) wherein he jotted down thoughts and phrases some of which he later used in his acknowledged writings and his Shakespeare poems and plays.¹⁴ In the *Promus* there are around a hundred of these colours of good and evil,¹⁵ and afterwards in *De Augmentis Scientiarum Libri IX* he recalled he had many more of these examples of good and evil (sophisms) ‘I have by me a great many more sophisms of the same kind, which I collected in my youth.’¹⁶ The central theme of the moral universe of good and evil running through *Like Will to Like* and its character Newfangle the Vice has been traced by countless Shakespeare editors and commentators in numerous Shakespeare plays including *Titus Andronicus*, *Richard III*, *I Henry IV*, *Henry V*, *The Merchant of Venice*, *Measure for Measure*, *Hamlet*, *Othello*, *King Lear*, *Macbeth*, and most importantly in *Twelfth Night* where Bacon reveals he wrote *Like Will to Like* while he was a young boy.¹⁷ In the fourth Act Feste continues to taunt and torture Malvolio before eventually agreeing to fetch him some paper and ink before delivering the following song:

FESTE I am gone, sir,
 And anon, sir,
 I’ll be with you again,
 In a trice,
 Like to the old Vice,
 Your need to sustain,
 Who with dagger of lath
 In his rage and his wrath
 Cries ‘Aha,’ to the devil,
 Like a mad lad,
 ‘Pare thy nails, dad,
 Adieu, goodman devil.’

[*Twelfth Night, Or What You Will*: 4:2:123-34]¹⁸

The song explicitly refers to the old Vice and his staple weapon the wooden dagger in the morality play *Like Will to Like* and just as Bacon also revealed in *De Augmentis* that he had been collecting his colours of good and evil in his youth, the central theme of his play *Like Will to Like*, in the closing song of *Twelfth Night or What You Will* he likewise obliquely reveals that he composed the morality play *Like Will to Like* when he was just a young boy:

FESTE (*sings*)

When that I was and a little tiny boy,
 With hey, ho, the wind and the rain,
 A foolish thing was but a toy,
 For the rain it raineth every day.

But when I came to man’s estate,
 With hey, ho, the wind and the rain,
 ’Gainst knaves and thieves men shut their gate,
 For the rain it raineth every day.

But when I came alas, to wive,
 With hey, ho, the wind and the rain,
 By swaggering could I never thrive,
 For the rain it raineth every day
 But when I came unto my beds,

With hey, ho, the wind and the rain,
With tosspots still had drunken heads,
For the rain it raineth every day.

A great while ago the world begun,
With hey, ho, the wind and the rain,
But that's all one, our play is done,
And we will strive to please you every day.
[*Twelfth Night, Or What You Will*: 5:1:385-404]

The controversial figures of Dee and Bacon marked out the Elizabethan epoch and both are synonymous with the period marking the transition of magic to science in the late sixteenth century. Dr Dee, and afterwards Bacon, worked for the English Secret Service and down the ages both have been closely linked with the Brotherhood of the Rosy Cross, in fact the two of them, have been put forward as their true founder and head, from which in the case of Dr Dee, a very curious legend has grown up:

In Germany in the seventeenth century it was generally accepted that Dee was a secret agent of the English Government and that he carried out his work by means of magical communication. Through the ages the legend grew into something larger until it was distorted into the story that Dee founded the Rosicrucians as a subsidiary of the British Secret Service and that through his planning it carried on into modern times as a permanent unit of that Service. Professor Trevor-Roper's book *The Last Days of Hitler*, tells how the humourless, but nevertheless efficient Himmler laid down quite categorically that the Rosicrucians were a branch of British Espionage!¹⁹

As with all legends, the jewel of truth is lost in the distortion of its remote delivery, and the truth itself is often so much greater than the grand myth which contains and conceals it. While he was still a young man at Cambridge Bacon founded his much fabled Brotherhood of the Rosy Cross and was later the author of its manifestos, and as we shall see, head of the English Secret Service, forerunner of British Intelligence. The Rosicrucians being founded as a permanent subsidiary unit of British Intelligence only hints at the real truth. The Rosicrucian Brotherhood is not simply a subsidiary of British Intelligence: at its very highest point it controls and directs it. Nor is its secret invisible power confined by borders. At its apex the Rosicrucian Brotherhood directs all the Secret Intelligence Services of the United States of America, with its invisible power and influence extending over several trans-national institutions, right up to and including, the European Union, NATO and the United Nations, a grand design whose secret engine was set in motion by its controlling mastermind several centuries earlier.

The two great polymaths Dr Dee and Bacon were universal in their approach to all branches of knowledge and learning and shared a burning desire to seek out all the secrets of the universe. Dee possessed the single largest library in England and Bacon the greatest mind. Aside from his great learning the erudite Dee was familiar with the finer intricacies of espionage learnt while working as a secret agent for Walsingham gathering intelligence on his behalf around Europe:

In Tudor times the effectiveness of espionage from overseas depended in the last resort on the efficiency of the ciphers used for messages. It was in this period that code-breakers came into



Fig. 4 Portrait of Dr John Dee (1527-1608) Artist Unknown, c. 1592, Ashmolean Museum, Oxford.

their own and there began a private war between rival espionage services to break each other's ciphers.

But while Latin Europe was still pursuing Latin ciphers both for speed and precision, in the north attempts were being made to develop a coded jargon. Walsingham had studied secret communications and the methods used on the Continent both in Venice and Florence. He brought back to England with him a copy of a manual on cryptography by one Alberti and soon put this into use. Thereafter both Burghley and Walsingham paid particular attention to new cryptographical developments and relied heavily on the advice of John Dee, who had made a great study of the subject. It was Dee who became closely acquainted with Jerome Cardan and introduced the Cardan grille system.

...Walsingham set up an elaborate cipher department in his house in London and here was undertaken not merely the deciphering of intelligence reports coming into London, but those intercepted from enemy sources, as well as setting up a section to specialise in forgeries for the planting of false documents.

Walsingham without question had the best cryptographic organisation in Europe, built up largely on the strength of his experts' knowledge of existing systems on the Continent, which he adapted for his use as well as using to decipher the messages of his opponents.²⁰

In April 1573 a twelve year old Francis and his elder brother Anthony Bacon went to Trinity College, Cambridge where they were placed under the care of the Master of Trinity, John Whitgift, later Archbishop of Canterbury. The Bacon brothers resided in Whitgift's own private quarters who personally directed their studies and supervised at the charge of Sir Nicholas Bacon all their domestic arrangements and requirements. Their studies at Cambridge were twice interrupted by the plague between August 1574 and March 1575, and again in August 1575, when Francis and Anthony went to visit Redgrave, before returning to the university in the October.²¹ It was during their time at Cambridge that Francis and Anthony met Thomas Phelippes the future 'grand master of intelligence ciphers', marking the beginning of an intimate relationship that largely took place in the shadows of the English Secret Service, nearly all of which has been carefully shrouded in secrecy for the last four hundred years. Five years older than Francis, it is not known for certain at exactly what date Phelippes entered Trinity College, Cambridge where he received his BA in 1574 and MA three years later in 1577. The stay of Francis and Anthony at Cambridge lasted until December 1575 with Francis spending the following year residing at York House with his father Lord Keeper Sir Nicholas Bacon, spending much of his time at the Elizabethan court, with all its secrecy, political intrigue, and domestic and foreign espionage.

With Cambridge behind him from this point on Bacon began his dual journey in life, the public life of Bacon, the one of lawyer, statesman and philosopher which fills the pages of his orthodox biographies and his other secret life (pointedly hinted at by his early editors and biographers) of raising from its foundations a universal system of knowledge, which needed to be carried out for the most part in secret. To help ensure the success of his grand vision Bacon founded the Brotherhood of the Rosy Cross and modern Freemasonry Brotherhood through which he afterwards established the first permanent English settlement in Jamestown, Virginia, thus founding what afterwards became the United States of America, the most powerful nation on earth. Through his secret societies Bacon quietly began to put in place a machine which in and beyond his own lifetime would encompass an enduring world-wide renaissance through his philosophical-scientific programme which partly involved the writing and publishing of books anonymously and pseudonymously across a wide range of all the liberal arts and sciences. The full implementing of this secret infrastructure continued down the ages by his Rosicrucian Brotherhood for the key purpose of laying eternal bases for



Fig. 5 Portrait of Spymaster Sir Francis Walsingham (c. 1532-1590) Head of the English Secret Service, Artist Unknown, c. 1585, National Portrait Gallery, London

humanity and to bring about his dream of the reformation of the whole world.

This ultra-grand secret and far-reaching vision was hinted at by his great editor and biographer at the beginning of *The Letters and Life of Francis Bacon* which occurred to him, and developed, during and after his departure from Cambridge. Even then his universal apprehension had already surpassed those of his illustrious contemporaries, in possessing the kind of exquisite mind that in the words of his editor and biographer Spedding, he could 'imagine like a poet and execute like a clerk of the works'.

While professing not to know precisely what the grand vision entailed and how he would secretly go about it (a wonderful form of delivery that Bacon would have been proud and other later Rosicrucian and Freemasonic writers would practice and aspire to), the incomparable Spedding set it forth in that inimitable way of his:

It was then that a thought struck him, the date of which deserves to be recorded, not for anything extraordinary in the thought itself, which had probably occurred to others before him, but for its influence upon his after-life. If our study of nature be thus barren, he thought, our method of study must be wrong; might not a better method be found? The suggestion was simple and obvious. The singularity was in the way he took hold of it. With most men such a thought would have come and gone in a passing regret; a few might have matured it into a wish; some into a vague project; one or two might perhaps have followed it out so as to attain a distinct conception of the better method, and hazard a distant indication of the direction in which it lay. But in him the gift of seeing in prophetic vision what might be and ought to be was united with the practical talent of devising means and handling minute details. He could at once imagine like a poet and execute like a clerk of the works. Upon the conviction This may be done, followed at once the question *How* may it be done? Upon that question answered, followed the resolution to try and do it.

Of the degrees by which the suggestion ripened into a project, the project into an undertaking, and the undertaking unfolded itself into distinct proportions and the full grandeur of its total dimensions, I can say nothing. But that the thought first occurred to him during his residence at Cambridge, therefore before he had completed his fifteenth year, we know upon the best authority-his own statement to Dr. Rawley. I believe it ought to be regarded as the most important event of his life; the event which had a greater influence than any other upon his character and future course. From that moment there was awakened within his breast the appetite which cannot be satiated, and the passion which cannot commit excess. From that moment he had a vocation which employed and stimulated all the energies of his mind, gave a value to every vacant interval of time, an interest and significance to every random thought and casual accession to knowledge; an object to live for as wide as humanity, as immortal as the human race; an idea to live in vast and lofty enough to fill the soul for ever with religious and heroic aspirations. From that moment, though still subject to interruptions, disappointments, errors, and regrets, he could never be without either work or hope or consolation.

So much with regard to the condition of his mind at this period we may I think reasonably assume, without trespassing upon the province of the novelist. Such a mind as we know from after experience that Bacon possessed, could not have grown up among such circumstances without receiving impressions and impulses of this kind. He could not have been bred under such a mother without imbibing some portion of her zeal in the cause of the reformed religion; he could not have been educated in the house of such a father, surrounded by such a court, in the middle of such agitations, without feeling loyal aspirations for the cause of his Queen and country; he could not have entertained the idea that the fortunes of the human race might by a better application of human industry be redeemed and put into a course of continual improvement, without conceiving an eager desire to see the progress begun.

Assuming then that a deep interest in these three great causes-the cause of reformed religion, of his native country, of the human race through all their generations-was thus early implanted in that vigorous and virgin soil, we must leave it to struggle up as it may, according to the accidents of time and weather.²²

The young Lord Keeper as Queen Elizabeth termed him was to begin his adult life at the very heart of international espionage and intelligence. It is not known for certain but it was probably decided by the Queen and Lord Keeper Bacon to send Francis to Paris in the train of Sir Amias Paulet, the ambassador to France. He would later recall with pride how he departed from England in service to the crown 'from her Majesty's royal hand' and that he 'kissed her Majesty's hands upon my journey into France'.²³ On 25th September 1576 the royal embassy led by Sir Amias Paulet in a train which included the fifteen year old Francis Bacon, Julius Caesar and the miniaturist Nicholas Hilliard landed at Calais. Following eight days of travel the newly installed Ambassador-elect to France arrived in Paris on 3 October and headed straight to the English Embassy which stood at the very centre of European intrigue and espionage.

Prior to his departure Sir Amias Paulet had received detailed instructions from the Queen set forth in a document written by her spymaster Sir Francis Walsingham. He was 'to negotiate on an international level, often in personal contact with sovereigns; adhere to all the complex protocol; provide a news and intelligence service' as well as make clear 'Elizabeth's goodwill towards the Huguenots'.²⁴ Among his duties in the first few days in Paris Paulet shared an audience with the French king and the queen mother 'But while afternoons and evenings were spent in official splendour, nights were spent conducting secret interviews with Huguenot leaders, such as Francois de la Noue and Philippe Du Plessis-Mornay, meetings aimed at building up and reinforcing Huguenot networks.'²⁵ This was the new exciting world in which the young Francis found himself immersed behind the guise of official diplomacy governed by political intrigue and one that operated in the dark shadows of intelligence and espionage. 'No clear distinction was made between legitimate diplomatic activity and undercover espionage. Much of the ambassador's most important work was done off the record. Paris was particularly valuable as a centre for information-gathering-both overt and covert-because of its strategic location...its relatively speedy access to London, and the embassy in Paris was the linchpin of an intelligence-gathering operation carefully constructed by Sir Francis Walsingham.'²⁶ Familiar with the Sir Amias Paulet's 'copy book' ignored by previous biographers, Jardine and Stewart revealed how it provided:

an extraordinary insight into the world which Francis Bacon inhabited for three years, revealing above all the sheer bulk of written work that the resident was expected to coordinate -work in which the members of his household certainly participated.

...Everything had to be done to an immovable deadline-the departure of the post, by which time all letters had to be drafted, converted into the relevant cipher (there were different ciphers for each recipient of sensitive information), and then copied into the copy-book for future reference.²⁷

Soon after leaving Cambridge, Bacon's friend the cryptographer Thomas Phelippes was sent to France by spymaster Sir Francis Walsingham in 1577 to liaise with other English agents abroad and to use his deciphering skills and channel information back to London. His reputation as a master decipherer was now well known to high ranking members of the secret English intelligence community and if a cipher proved difficult to break it was delivered to Phelippes wherever he was, in England or abroad, for him to go to work on it. By June 1578 Phelippes was residing with Bacon at the English embassy in Paris. The obscured relationship between Bacon and Phelippes nurtured from their days at Cambridge deepened and flourished in the secret environment of the political hotbed of Paris, then the very epicentre of European intelligence and espionage, where all the important diplomatic traffic and most of the everyday routine correspondence was, as a matter of course, enciphered. Bacon learned early the vital

importance of secret and enciphered correspondence and was even then familiar with most if not all of the accessible cryptographic works of the period.

If not at Cambridge, certainly at the British Embassy in Paris, Bacon and Phelippes were occupied with ciphers and other areas of cryptography on an almost daily basis. At a routine everyday level Bacon was involved in writing and enciphering diplomatic reports and letters and by return the deciphering of letters into clear text finding their way to Paris from around the continent and Walsingham's house in London where the cipher and their keys were known to the recipient. With his specialist skills, Phelippes played an integral part in Sir Amias Paulet's vast letter writing operation dispatching enciphered reports backwards and forwards to the principal English ministers of state, including Secretary of State Sir William Cecil and his brother-in-law Lord Keeper Sir Nicholas Bacon and Sir Francis Walsingham. It also clearly involved the deciphering of enemy correspondence intercepted by English and foreign agents, much of which contained very important information regarding matters of national security, which it was vital to immediately read in real time.

At the English embassy in Paris the two of them were conversing and working daily with the secret language of ciphers. Still then only in his early twenties, Phelippes was already known in high private circles as the greatest cryptanalyst in England. Working closely alongside his friend Bacon who shared his deep fascination with cryptology, the conversation naturally turned not only to available manuscripts and printed works on the subject, it positively extended to all that was then known about ciphers and their possibilities. From his own later account back in Paris Bacon's penetrating mind turned to the infinite possibilities of cryptology and to the invention of new ciphers. In his *De Augmentis* Bacon provides a detailed explanation of his bi-literal cipher 'which I devised myself when I was at Paris in my early youth',²⁸ a cipher system he secretly inserted into his Shakespeare works and other writings written in the names of others:

It was in France that Francis had his first experience of ciphers and cryptography, which were to play such an important role not only in his later life, but also in his posthumous reputation as the shadowy figure whose authorial identity is cryptically contained in anything from the works of Shakespeare to the Rosicrucian manifesto. In this field, he was lucky to strike up an early relationship with the grand master of intelligence ciphers, Thomas Phelippes, a servant of Sir Francis Walsingham, who had been placed with the embassy to give it the benefits of his skills in languages and ciphering. Bacon and Phelippes also remained close over the following years: Francis was a friend of Thomas' father, employed his younger brother as secretary and close companion during the early 1580s, and recommended Thomas himself to the attention of the earl of Essex in 1591...

An integral element of Phelippes' prowess in cryptanalysis was his mastery of the various languages in which the European powers operated—at least French, Italian, Spanish, Latin and German.

...What Francis learned under Thomas Phelippes remained with him for the rest of his life.²⁹

Living in Paris at the time when Bacon was busy working with and inventing new ciphers was the French diplomat and famous cryptographer Blaise de Vigenère. In all the orthodox biographies of Bacon where his time in France (with the exception of Jardine and Stewart), is passed over in a breeze, none have mentioned the possible connection Bacon may have had with Vigenère. In 1910 Charles P. Bowditch in *The Connection of Francis Bacon with the First Folio of Shakespeare's Plays and with the Books On Cipher Of His Time* remarked 'It must be remembered. . .that while Bacon was making cipher of his own in Paris. . .Vigenère was the acknowledged master of the art of cipher in France. It would be almost impossible to suppose that the two men

were unacquainted with each other, and it is not improbable that Bacon may have had some influence on Vigenère and his work.³⁰ Even though Bacon and the great French cipher expert Blaise de Vigenère of course knew each other their relationship has been kept secret for the last four hundred years which will be here properly established for the first time.

There was another English gentleman staying with Bacon at the embassy under the charge of Sir Amias Paulet who was very much directly involved in the production of a book by Blaise De Vigenère, the great miniaturist Nicholas Hilliard. It was while in Paris in 1578 that Hilliard provided us with one of the earliest known images we have of Bacon as a young man. According to Sir Roy Strong, Hilliard's miniature of Bacon 'is of superlative quality. The features are delicately rendered, the eyes turned out towards the spectator, the lips thin and compressed. The sitter is altogether a superior young man and the inscription leaves us in no doubt as to his intelligence: *1578 Si tabula daretur digna/Animum mallem AE^s S. 18.*'³¹ It is worth noting that the writing around the miniature (excluding the 'AE^s') comprises 33 letters (33 is simple cipher for Bacon) and the addition of the numbers 1+5+7+8+1+8=30 which added to the 3 characters 'AE^s' gives a total of 33, again simple cipher for Bacon.

During his two years in France Hilliard spent his time partly at the French Embassy and partly in the service of the powerful Francis, Duke of Anjou. It seems most likely Hilliard travelled to France with instruction from Queen Elizabeth to provide her with a likeness of Francois, Duc d'Alencon who was the third son of Catherine De Medici and brother of King Henri III of France. Being in the service of Alencon, Hilliard was close to the court of the last Valois king, Henri III. At the time the Duke was on more friendly terms with his brother King Henri and Hillard was able to move freely in the circles of the intellectuals and artists which gathered around the royal court. He must also have become acquainted with the equally brilliant court of Navarre presided over by Alencon's sister Marguerite, Queen of Navarre with whom Bacon had a passionate love affair whose secretly proposed marriage to her was denied by Elizabeth. Both the Duke and the English Embassy travelled to Poitiers in the summer of 1577 where Hilliard met the artist Jacques Gaultier who was closely connected with the Queen of Navarre and the two of them struck up a close friendship.

Aside from the poets and artists in the courts of Henri III and those gathered around the court of Navarre one of Hilliard's closest admirers in France was the philosopher and man of letters Blaise de Vigenère, whose reputation all over learned France made him a man greatly admired by his English friend, the young Francis Bacon. At this time Vigenère was working as a secretary to the Duke of Nevers. In a letter to the Duke, Vigenère described Hilliard as an outstanding artist and suggested he should be commissioned to paint the portraits of the leading figures of the day. Hilliard learned from Vigenère, who was in charge of the production of a book, he was unhappy with some earlier portrait engravings made by two different artists, and requested Hilliard should be entrusted with making the portrait engravings and even suggested the Duke travel to Paris to sit for him.³² Whether the book was ever completed is not known but Hilliard certainly made portraits of the Duke and Duchess of Nevers for a small book containing the constitution of the charity they had founded named the Foundation du duc de Nivernois to arrange marriages for sixty poor maidens.³³ In a letter to the Duke dated 20th February 1578 Vigenère informs him he was having difficulty locating the whereabouts of Hilliard. He was staying with 'maistre Herman L'orfevre' thought to be Germain Pilon, an eminent goldsmith and sculptor employed by Henri III and then mistakenly believed to have gone to court. The elusive Hilliard was finally discovered



Fig. 6 Francis Bacon at 17 years old by Nicholas Hilliard, 1578,
National Portrait Gallery, London

at the house of ‘maistre Georges, le peintre de la reyne’ the Flemish painter George of Ghent where Vigenère discovered Hilliard and discussed with him the portraits for the Foundation book.³⁴ The Frenchman greatly admired Hilliard’s work and in an eulogy, printed by Walpole, Vigenère fulsomely praised his artistic qualities.³⁵ Whether it was Hilliard who introduced Bacon to Vigenère, or Bacon introduced Vigenère to Hilliard, is not known. What can be said with some confidence is their mutual friendships acted as a fortuitous conduit for the three of them to meet, discuss and plan, the productions of joint writings and others undertakings.

History does not afford us any details about the meetings and discussions that took place between the young Francis Bacon and the philosopher and grand old master of French ciphers Blaise de Vigenère, however it requires little imagination to realise their shared fascination for cryptology, both of whom were later to put pen to paper on the subject, was uppermost in their conversations. Nor is it inconceivable that their two minds then busy with introducing new ciphers, at the time Bacon invented his famous bi-literal cipher and Vigenère later producing a cipher system in *Traicte des Chiffre* very much like it, that they did not pool their cipher brains, and as Vigenère and their mutual friend Hilliard had done for another book, work jointly in producing a work on ciphers, one continued in secret for several years to come.

A pointer may have been provided by Basil Montagu in the three volume edition *The Works of Francis Bacon...With a Life of the Author*. Included in his new biography of Bacon of one hundred and sixteen folio pages is a very curious passage referring to his time in France—here quoted in full:

After the appointment of Sir Amias Paulet’s successor, Bacon travelled into the French provinces, and spent some time at Poitiers. He prepared a work upon ciphers, which he afterwards published, with an outline of the state of Europe, but the laws of sound and of imagination continued to occupy his thoughts.³⁶

The ambiguous wording and nature of the passage renders its meaning unclear. In the passage printed by Montagu he puts a footnote number after the word cipher. The footnote at the bottom of the page quotes the Latin passage from *De Augmentis* where Bacon describes his bi-literal cipher and Gilbert Watt’s English translation ‘But that jealousies may be taken away, we will annex another invention, which, in truth, we devised in our youth, when we were at Paris: and is a thing that yet seemeth to us not worthy to be lost. It containeth the highest degree of cipher, which is to signify omnia per omnia, yet so, as the writing infolding, may bear a quintuple proportion to the writing infolded; no other condition or restriction whatsoever is required.’³⁷ The text passage written by Montagu is confusing because he knows the discussion on ciphers by Bacon in the *Advancement of Learning* comprises nothing more than a couple of paragraphs and in the *De Augmentis* issued in 1623 the discussion on ciphers amounts to a few pages. By any stretch of the imagination neither example amounts to a work on ciphers as it would normally be understood, nor did Bacon publish an independent work on ciphers, that is, not with his own name attached to it. What does he mean by the sentence ‘He prepared a work upon ciphers, which he afterwards published, with an outline of the state of Europe’, when linking it together in the same sentence with the State of Europe (Notes on the State of Christendom) believed to have been written in 1582 with a mysterious work on ciphers? Either the sentence is poorly constructed and only refers to Bacon’s comments on ciphers in *The Advancement of Learning* and *De Augmentis* published in 1605 and 1623 respectively, or conceivably, Montagu was

hinting that Bacon had some time after his known stay in Paris, he literally published a work on ciphers under a different name.

The only major work from this period to be published on ciphers around the time as *Notes on the State of Christendom* written in 1582 was the *Traicte des Chiffres* printed in the name of Blaise de Vigenère. The volume running to several hundred pages was being prepared and written during the early 1580s leading to its publication in 1586. Sir Edwin Durning-Lawrence a voluminous writer on Bacon and his authorship of the Shakespeare works who had also long studied his links to work on ciphers, especially the cipher book *Cryptomenytices et Cryptographiae libri IX* published at Luneburg in 1624, was of the view Blaise de Vigenère may have been a mouthpiece for Bacon and his bi-literal cipher:

In 1586 appeared in *Paris Traicte des Chiffres*, by Blaise de Vigenère, dedicated to Monsieur Antoine Seguier. From internal evidence we learn that Vigenère was in Rome in 1549 and 1551, and in Italy in 1568.

After a reference to the sacred writings of the Ancients who therein veiled the holy secrets of their theology, he continues (p.4) that his book is of similar cyphers, but “rare and known to few people-learnt partly from others in our travels in different parts of Europe, but the greater part originated in our own thoughts, and not, so far as we know, touched upon by anyone until now.” He acknowledges he learnt one cypher on his first visit to Rome, and he explains (p. 227) that some have treated of their philosophy by numbers and proportions, others by geometrical figures, others by the harmony and concords of music, others under the wrappings of fables, enigmas and allegories. Previous works on cyphers, such as Trithemius, give as keys consecutive *words* (p. 48), such as verses of Virgil and of other poets; others are content with the date of the month or day, or employ the last word preceding the hidden message. Vigenère claims to be the first to use the device of making *letters* depend upon each other and serve as keys by 1st, shape; 2nd, size; 3rd, quality or equivalence; 4th, place.

Several cyphers depend on difference of type (p. 241), and he gives four types of each letter, saying (p. 245) the difference between them must be of the slightest-only sufficient to be discerned by the initiated, so that suspicion may be removed. On p. 200 he explains a cypher where each combination of three letters, three numbers, or of dots, dashes, or of long and short syllables in threes, equals *one* letter; thus aaa or 444 = D, aab or 447 = E, eeb or 887 = A. This is worked on the same principle as Francis Bacon’s Bi-literal, only whereas Bacon groups his letters in *fives*, Vigenère groups them in *threes*, but both depend on the shape, size, quality, and place of letters.

Francis Bacon’s brilliancy of intellect was already noted in Paris in 1578, when the works “*Si tabula daretur digna animum mallem*,” were written round his portrait (see Lord Bacon’s Life by Spedding, p.7). That his mind was at that time occupied with cyphers we know from “The Advancement of Learning,” VI., p. 265: “We will annexe another invention, which in truth we devised in our youth, when *we were in Paris*, and is a thing that yet seemeth to us not worthy to be lost.” He then explains the Bi-literal Cypher.

As Bacon claims to have invented his cypher in Paris in 1576-9, and as Vigenère, whose book appeared in 1586, acknowledges that some cyphers he had learnt from people he met, there is some reason to believe that Vigenère is the mouthpiece of Bacon. The Bi-literal is more fully developed, but Vigenère ingenuously confesses that he has deliberately “cast some shadows over his work in order not to make the cyphers, together with several other artifices which depend thereon, equally comprehensible to the unworthy and the ignorant as to those who by knowledge, study, and worth deserve it” (p. 194). At that time Bacon would not be ready and willing to place in the hands of the world the key to his secrets.³⁸

The *Traicte des Chiffre ov secretes Manieres d’escrire* is a curious compendium of current knowledge on code and ciphers as it then currently stood. The remarkable

work reveals its author was familiar with the books of Trithemius, Belaso, Cardano, Porta and the unpublished manuscript of Alberti.³⁹ It is an irony not uncommon in the annals of cryptology that the Vigenère cipher for which its author is still famous he scrupulously assigned the credit to several earlier writers, whereas his single greatest contribution to cryptology, the auto-key (a vast improvement upon a similar device developed by Cardano) went unnoticed until the nineteenth century.⁴⁰

Virtually all later writers on cryptology and Vigenère state the first detailed analysis of *Traicte des Chiffre* in English appeared in an article written by C. J. Mendelsohn who during World War I was involved in postal and newspaper censorship for the US government. He was made Captain in the US Military Intelligence Division of the General Staff of the Army in charge of the department for breaking German codes.⁴¹ The article entitled ‘*Blaise De Vigenère and the “Chiffre Carre”*’ (the proofs of which were corrected by his friend and intelligence colleague W. F. Friedman) in discussing the so-called Vigenère cipher provides a detailed history on the early development of European cryptology. Almost the first one hundred pages of the *Traicte des Chiffre* (which runs to more than six hundred pages) must be read, writes Mendelsohn, before it finally seriously gets underway with its principal subject, and again before long, it soon wanders off into further philosophical digressions. Its author is ‘permeated with Gnostic philosophy’, he continues, and more specifically adds David Kahn, the work digresses ‘into the foundations of alchemy, licit and illicit magic, the secrets of the kabbalah, the mysteries of the universe, recipes for making gold, and philosophic speculations.’⁴² Prior to the article by Mendelsohn, and apparently unbeknown to later writers on cryptology, including the Friedmans, David Kahn, its two bibliographers Professor Galland and Shulman, as well as David Newton, the compiler of the only encyclopaedia on cryptology, fifty years earlier an English scholar had subjected the *Traicte des Chiffre* to a detailed examination, namely James Spedding, editor of the fourteen volume *The Life and Works of Francis Bacon*. Hidden away at the back of volume one of Bacon’s *Philosophical Works*, Spedding examines the ciphers systems referred to by Bacon in *De Augmentis*, the simple cipher (*ciphra simplex*), the wheel cipher, the Key or Kay cipher (*ciphra clavis*) and the famous Bacon Bi-literal Cipher. His discussion of these ciphers reveals Bacon (and Spedding himself) was intimate with the cipher works of Trithemius, Porta and Vigenère:

The earliest writer, I believe, on ciphers, except Trithemius whom he quotes, is John Baptist Porta, whose work *De occultis literarum notis* was reprinted in Strasburg in 1606. The first edition was published when Porta was a young man. The species of ciphers which Bacon mentions are described in this work. What he calls the *ciphra simplex* is doubtless that in which each letter is replaced by another in accordance with a secret alphabet. (Porta, ii. c. 5.) The manner of modifying this by introducing non-significants and by other contrivances is described in the following chapter. The *wheel cipher* is described in chapters 7, 8, 9. It is that in which the ordinary alphabet and a secret one are written respectively on the rim of two concentric disks, so that each letter of the first corresponds in each position of the second (which is movable) to a letter of the secret alphabet. Thus in each position of the movable disk we have a distinct cipher, and in using the instrument this disk is made to turn through a given angle after each letter has been written. The *ciphra clavis* is described by Porta, book ii. 15, 16. It is a cipher of position; that is, one in which the difficulty is obtained not by replacing the ordinary alphabet by a new one, but by deranging the order in which the letters of a sentence or paragraph succeed each other. This is done according to a certain form of words or series of numbers which constitute the key. The *cipher of words* was given by Trithemius and in another form by Porta, ii. 19. (and in a different shape, v. 16.). It is a cipher which is meant to escape suspicion. Each letter of the alphabet corresponds to a variety of words arranged in columns. Any word of the first column followed by any of the second, and

that followed by any of the third, &c., will make, with the help of a non-significant word occasionally introduced, a perfectly complete sense; and by the time the last alphabet has been used, a letter on some indifferent subject has been written. Only sixty alphabets are given by Porta, and therefore the secret communication can consist only of sixty letters. It is worth remarking that when Porta wrote it was usual to put the sign of the cross at the head of an ordinary epistle. The first of his alphabets corresponds not to a series of words but to two and twenty different modifications of the figure of a cross, and his second alphabet similarly corresponds to two and twenty different modifications of the introductory flourish. His sixtieth alphabet is of the same kind. We see here perhaps whence Bacon derived his idea of giving significance to seemingly accidental modifications of the characters of ordinary writing.

The idea of a *biliteral alphabet*, which Bacon seems to claim as his own, is employed, though in a different manner, by Porta. His method is in effect this. He reduces the alphabet to sixteen letters, and then takes the eight different arrangements *aaa, aba, &c.*, to represent them; each arrangement representing two letters indifferently: the ambiguity arising from hence he seems to disregard. In this manner he reduces any given word or sentence to a succession of *a*'s and *b*'s. At this point his method, of which he has given several modifications, departs wholly from Bacon's. Let us suppose the biliteral series to commence with *aababb*. A word of two syllables and beginning with *A* indicates that two *a*'s commence the series; any monosyllable will serve to show that one *b* follows, another that it is succeeded by one *a*, and then any dissyllable will stand for *bb*. Thus *Amo te mi fili* or *Amat qui non sapit* will represent the biliteral arrangement *aababb*, and so on on a larger scale. Porta's method is therefore not, like Bacon's, a method *scribendi omnia per omnia*, but only *omnia per multa*. Still the analogy of the two methods is to be remarked: both aim at concealing that there is any but the obvious meaning, and both depend essentially on representing all letters by combinations of two only. See the *De oc. Lit. Signia*. v. c. 3.

The *Polygraphia* of Trithemius (dedicated to Maximilian in 1508) consists of six books. The first four contain extensive tables constituting four different *ciphrae verborum*; the first and second of which are significant, and relate, the former to the second person of the Trinity, and the latter to the Blessed Virgin. The fifth and sixth books are of less importance. *Trithemius*, written in the cipher of the second book, becomes "Charitatem pudicissimae Virginis Mariae productricis coexistentis verbi, robustissimi commilitonis mei dilectissimi devotissime benedicamus; vivificatrix omnium," &c.

Traicte des Chiffre, ou secretes manieres d'escrire, par Blaise de Vigenère, Bourbonnois. (Paris, 1587.)

This work is described by the author as what he had saved of his work "*Du Secretaire*," written in Italy in 1567 and 68. The two first books were stolen at Turin in 1569. The third is the foundation of the present work. (v. f. 285. verso.) He says he had revealed nothing of its contents.

The two authors whom he chiefly mentions are Trithemius and Porta; that is, modern authors; for there is a great deal said of the Cabala. The key ciphers of which Porta speaks he ascribes to a certain Belasio, who employed it as early as 1549: Porta's book not being published until 1563, "auquel il a insere ce chiffre sans faire mention dont il le tenoit." Porta's book, he goes on to say, was not *en vente* until 1568. The invention was ascribed to Belasio by the grand vicar of St. Peter at Rome, who had great skill in deciphering. (f. 35. rect. and 37. verso.)

At f. 199. Vigenère gives an account of ciphers in which letters are represented by combinations of other letters, -which Porta had already done, but which he varies in a number of ways.

f. 200. A table where the twenty-three letters of the alphabet, and four other characters are represented by combinations of *abc*. D (e. gr.) = *aaa*, S=*bac*, &c.)

f. 201. A smaller table where an alphabet of twenty-one letters is similarly represented.

f. 202. An alphabet of twenty letters represented by binary combinations of five letters,

a=ED, &c.

f.202. goes on to what Bacon speaks of, a cipher within a cipher, You write in a common cipher with an alphabet of eighteen letters; the cipher being such that the five vowels are used as nulls; then by the last cipher these five vowels are made significant, and give the hidden sense. He seems to speak of this as his own.

After mentioning a cipher described by Cardan, he goes on, f. 205. to Porta's ciphers by transposition, &c.

At f. 240. he shows how characters may be multiplied by different ways of writing them; which Porta had not done.

f. 241. An alphabet and &, each character written in four ways.

f.241 verso, An application of these variations.

f.242. He remarks that a great variety of uses may be made of this idea, and gives some.

f.244. He goes on "De ce meme retranchement et de la variete de figure, part une autre invention encore d'un chiffre carre a double entente, le plus exquis de tous ceux qui ayent este decouvers jusqu'a icy," &c. You write with twelve letters only, as in the subjoined table, in which however I have not followed his ways of diversifying.

	<i>P</i>	<i>C</i>	<i>T</i>	<i>E</i>	<i>I</i>	<i>L</i>	<i>M</i>	<i>N</i>	<i>A</i>	<i>R</i>	<i>S</i>	<i>V</i>
<i>E</i>	a_1	a_2	a_3	b_1	b_2	b_3	c_1	c_2	c_3	d_1	d_2	d_3
<i>P</i>	e_1	e_2	e_3	f_1	f_2	f_3	g_1	g_2	g_3	h_1	h_2	h_3
<i>V</i>	i_1	i_2	i_3	k_1	k_2	k_3	l_1	l_2	l_3	m_1	m_2	m_3
<i>C</i>	n_1	n_2	n_3	o_1	o_2	o_3	p_1	p_2	p_3	q_1	q_2	q_3
<i>T</i>	r_1	r_2	r_3	s_1	s_2	s_3	t_1	t_2	t_3	u_1	u_2	u_3
<i>L</i>	x_1	x_2	x_3	y_1	y_2	y_3	z_1	z_2	z_3	δ_1	δ_2	δ_3
<i>I</i>												
<i>M</i>												
<i>A</i>												
<i>N</i>												
<i>R</i>												
<i>S</i>												

In this table, z_1 , for instance, represents, 1st M, and 2nd R or S; to distinguish whether R or S, he has recourse to a supplementary contrivance by nulls.

f. 242.v. He refers to table at 200., and says the three letters $a b c$, (which there represent I) may be replaced by a single character; for this table represents in another column letters by dots. Thus T is; D ...; or if we will we may put o 's for dots; so that D = $o o o$ and T = $o o o o o o$; and the spaces may be filled up with a slightly varied o . Thus D = $o o o o o$, T = $o o o o o o o o$, and thus the whole cipher will apparently consist of o 's.

The transition from this to Bacon's cipher is so easy that the credit given to him must be reduced.⁴³

For four hundred years the custodians of the multitude of secrets surrounding Bacon and his life have successfully managed to obscure his secret lifetime relationship with Thomas Phelippes, a man described by Kahn as 'England's first great cryptanalyst'.⁴⁴ Very little is known about the mysterious Thomas Phelippes the master cryptanalyst and key member of the English Secret Service who worked alongside spymaster Sir Francis Walsingham and Francis and Anthony Bacon for several decades.

33,520 TRAICTÉ
DES CHIFFRES,
OV SECRETES
MANIERES
D'ESCRIRE:

PAR
BLAISE DE VIGENERE,
BOVRBONNOIS.



A PARIS,
Chez ABEL L'ANGELIER, au premier pillier,
de la grand' Salle du Palais.

M. D. LXXXVI.

AVEC PRIVILEGE DV ROY.

Fig. 7 The title page of Blaise de Vigenère *Traicte Des Chiffres Ov Secretes Manieres D'escire* (1586)

TRAICTE
DES CHIFFRES
OV SECRETES
MANIERES
D'ESCRIRE:

PAR
BLAISE DE VIGENERE,
BOVRBONNOIS.

François Perier



A PARIS,
Chez ABEL L'ANGELIER, au premier pillier
de la grand' Salle du Palais.

M. D. LXXXVII

AVEC PRIVILEGE DV ROY.

Fig. 8 The title page of Blaise de Vigenère *Traicte Des Chiffres Ov Secretes Manieres D'escrire* (1587)

For several centuries his life has been shrouded in secrecy and mystery. There is very deliberately no entry assigned to England's first great cryptanalyst in the *DNB*.⁴⁵ Astonishingly, moreover, Bacon's lifelong friend then England's greatest cryptanalyst Thomas Phelippes does not receive a single entry on the index of *The Shakespeare Ciphers Examined* by the Friedmans, a work which supposedly thoroughly examines and analyses Bacon's knowledge and use of ciphers in the Shakespeare poems and plays!⁴⁶

The entry for Thomas Phelippes in the comprehensive and standard *Encyclopedia Of Cryptology* (Oxford, 1998) reads as follows 'Phelippes, Thomas See Babington plot',⁴⁷ wherein, an entry of three brief paragraphs and three mentions of Phelippes are found, relating to the Babington Plot, the often repeated infamous plan to assassinate Queen Elizabeth.⁴⁸

The thwarted plan centred upon a series of enciphered letters passed between Mary Queen of Scots and her Catholic co-conspirators which were passed on to Sir Francis Walsingham via double agent Gilbert Gifford with Thomas Phelippes responsible for deciphering the correspondence which ultimately sealed Mary's fate.

In his monumental standard work on cryptology *The Codebreakers* which is never likely to be surpassed, David Kahn devotes a couple of pages to Thomas Phelippes and his involvement in the Babington plot to place the Catholic Mary, Queen of Scots on the English throne. Unsurprisingly, Kahn knows considerably more about Thomas Phelippes than those writers on cryptology who went before him. His well condensed account also includes the only known description of Phelippes from the pen of no less a personage than Mary, Queen of Scots who described her nemesis as "of low stature, slender every way, eated in the face with small pocks, of short sight, thirty years of age by appearance."⁴⁹ Working with spymaster Sir Francis Walsingham and Francis Bacon the master cryptanalyst Phelippes had been working at the cryptographic heart of the English Secret Service for nearly a decade when the plot to assassinate Queen Elizabeth started to take real shape in the middle of the 1580s.

In 1585 Mary, Queen of Scots was residing under house arrest at Chartley under the close supervision of Sir Amias Paulet with whom Bacon and Phelippes had lived with at the English embassy in Paris a few years before. As the concealed son of Elizabeth and raised by the Lord Keeper of the Realm Sir Nicholas Bacon the concealed heir to the throne had grown up with the problem of Mary, Queen of Scots from almost the day he was born. Not only had he an important secret and private interest in the matter touching the succession of the English crown he was also surrounded by all the major players in the unfolding drama: his royal mother Queen Elizabeth, the statesmen Sir Francis Walsingham and his uncle William Cecil, Lord Burghley who oversaw the security of her royal person and the kingdom, her jailer Sir Amias Paulet, and the grand master of codes and ciphers, Thomas Phelippes.

The fatal plot to free Mary, Queen of Scots, assassinate Elizabeth, and promote a Catholic uprising began to reach its climax in the summer of 1586. For some months she had been sending and receiving enciphered letters smuggled to her in a beer keg. During the intervening months Walsingham wisely let the plot develop while waiting for the right moment to pounce. Keeping a close eye on the comings and goings at Chartley as well as gathering up as much information elsewhere from spies and paid informants the patient spymaster did not want to move too soon, if it meant the main prize Mary, would somehow escape his clutches and explain away her guilt.

A letter written by Babington in early July set out the details of the plan to Mary. It made references to the Spanish invasion, her liberation and the killing of Elizabeth. At first Mary hesitated. Several days passed as Walsingham and Phelippes who had read

the incriminating letter from Babbington waited anxiously for her reply. On 17th July the enciphered letter left Chartley hidden in the beer cask on the back of the brewer's cart. The enciphered letter was in the hands of Phelippes the next day for him to go to work on. On its decipherment it revealed the treacherous enterprise implicating Mary in the conspiracy to despatch Elizabeth and place herself on the throne of England. On deciphering its contents on the outside of the letter Phelippes who fully understood its import and implication sketched a picture of the gallows that now awaited her.

Like all previous writers on cryptology that went before him and those who later followed in his distinguished footsteps, David Kahn at no time refers to Bacon and his relationship with Thomas Phelippes apparently because he does not know of it. This is no reflection on Kahn who is after all the world's leading historian on cryptology. At no time does Kahn, or anyone else on his behalf, claim for him an especial authority or expertise on Bacon. His understanding of the importance of Bacon's writings on cipher systems and their application, and his place in the pantheon of cryptology, is in the main derived from people who he and others believed were trusted and reliable experts on Bacon and Baconian ciphers, the fraudulent Friedmans. Their researches into Bacon should have made the Friedmans aware of the close and inward friendship and professional relationship of Bacon and Phelippes, the man apparently responsible for fatally deciphering the correspondence of Mary, Queen of Scots, undoubtedly the most well-known example of cryptanalysis of the time, especially given its relation to Queen Elizabeth and the other leading female figure of the time, no less than her rival claimant to the English throne Mary, Queen of Scots.⁵⁰ Yet in *The Shakespeare Ciphers Examined* the fraudulent Friedmans do not once refer to the key relationship between Bacon and the grand master of ciphers Phelippes, both of them key members of the cipher division of the English Secret Service.

In the 1586 parliament on 3 November Bacon who some believe also worked closely with Phelippes on the decipherments of the correspondence of Mary, Queen of Scots gave a speech in favour of her execution and the next day he was appointed most likely at the behest of spymaster Sir Francis Walsingham and his uncle William Cecil, Lord Burghley to a committee charged with drawing up a petition for her execution.⁵¹ On 8 February 1587 at Fotheringhay Castle Mary, Queen of Scots was executed and shortly after Bacon commenced planning, writing and organising the performance of a little known play *The Misfortunes of Arthur* (an allegory about Queen Elizabeth and Mary, Queen of Scots) performed at Greenwich before Queen Elizabeth in February 1588 a date notable for marking the beginning of what is known as the Shakespearean era. Its themes and language find expression and are demonstrably echoed in a wide range of Shakespeare plays including the first tetralogy *1 Henry VI*, *2 Henry VI*, *3 Henry VI* and *Richard II*, written around the same time, or shortly after *Misfortunes*, and some of the other early plays *Titus Andronicus*, *King John* and *The Comedy of Errors*, through to *The Merchant of Venice*, *Hamlet*, *Macbeth*, and the last plays, like *The Tempest*.⁵² It was watched by its sole author Bacon, Phelippes and other members of the English Secret Service, who had been instrumental in thwarting the Catholic threat of Mary and keeping the Protestant Queen Elizabeth firmly on her throne, maintaining the security of the kingdom and the critical balance of power throughout Europe.

Three years later in 1591 there appeared in London a Latin edition of a milestone work on cryptology by the Italian polymath and playwright *Giambattista della Porta* entitled *De Fvtivis Literarvm Notis* printed by John Wolfe with whom Bacon and his uncle Sir William Cecil, Lord Burghley had a secret clandestine relationship.⁵³ This is a reprint of the work that originally appeared with the same title at Naples in 1563.⁵⁴ It

is divided into four books: Book 1 deals with ancient ciphers; Book II gives 180 modern ciphers; Book III is a treatise on cryptanalysis or deciphering; Book IV provides linguistical tables of syllables and words to help cryptographic solution, and in it appeared ‘the first diagraphic cipher in cryptology, in which two letters were represented by a single symbol.’⁵⁵ This rare book, observes Kahn, ‘encompassed the cryptologic knowledge of the time’,⁵⁶ and for Dr Mendelson its author Porta ‘was, in my opinion, the outstanding cryptographer of the Renaissance. Some unknown who worked in a hidden room behind closed doors may possibly have surpassed him in a general grasp of the subject, but among those whose work can be studied he towers like a giant.’⁵⁷ This was undoubtedly a very important landmark work in the history of cryptology which makes it all the more remarkable that the fraudulent Friedmans only once referred to Porta in *The Shakespeare Ciphers Examined* delivered with a fishing metaphor that smelt to the high heavens, which I here quote in full:

...the numerologists have spread their nets wider than this. Among the odd fish they [the Baconians] have caught are the sixteenth-century Italian cryptographer Ioan Baptiste Porta, numerous seventeenth-century authors, and Elizabethan writers in shoals.⁵⁸

The *De Furtivis Literarum Notis* has an interesting and revelatory history involving the printer John Wolfe assisted by Petruccio Ubaldini who worked closely with Bacon and his uncle Sir William Cecil, first revealed by W. T. Smedley more than century ago in an edition of *Baconiana* in 1910:

In 1591 John Wolf re-published Baptista Porta’s work on cyphers, published by Ioa Maria Scotus in Naples in 1563, but according to Spedding not *en vente* until 1568. This reprint was dedicated to Henry Percy, Earl of Northumberland. After the edition had been printed off, the title-page was altered to correspond with the 1563 publication, the dedication was taken out and a copy of the original dedication was substituted, and over this was placed the AA headpiece. Then an edition was struck off which until to-day has been sold and re-sold as the first edition of Baptista’s work.⁵⁹

Smedley owned a copy of each of the original genuine 1563 edition of *De Furtivis Literarum Notis*, the falsely dated edition published by Wolfe made to look like the original 1563 edition with a Baconian-Rosicrucian AA headpiece over the dedication page, and the 1591 edition of *De Furtivis Literarum Notis* republished by Wolfe with a dedication to Henry Percy, Earl of Northumberland:

The false-dated copy is annotated throughout in Francis Bacon’s handwriting. As was his invariable custom he went through the errata, altered each one, and as he did so ticked off the schedule [and] when I opened the 1591 copy I was surprised to find there also Bacon’s handwriting.⁶⁰

The 1591 dedication page of *De Furtivis Literarum Notis* republished by John Wolfe signed by ‘Jacobus Casteluiltrius’, a literary front for Bacon,⁶¹ to Henry Percy, Earl of Northumberland contains several Baconian/Rosicrucian ciphers. It will be observed that the dedication page contains a large capital C which represents the number 100 in Roman numerals: 100 Francis Bacon in simple cipher. The first line within the large capital C comprises 33 letters: 33 Bacon in simple cipher. Within the woodblock there are 234 letters which minus 1 large capital C: 234-1=233, a triple cipher for Francis Bacon (100)/Francis Bacon (100)/Bacon (33) and in total within the woodblock there are 43 words comprising 234 letters: 43+234=277, a split cipher for Francis Bacon (100)/William Shakespeare (177) in simple cipher.

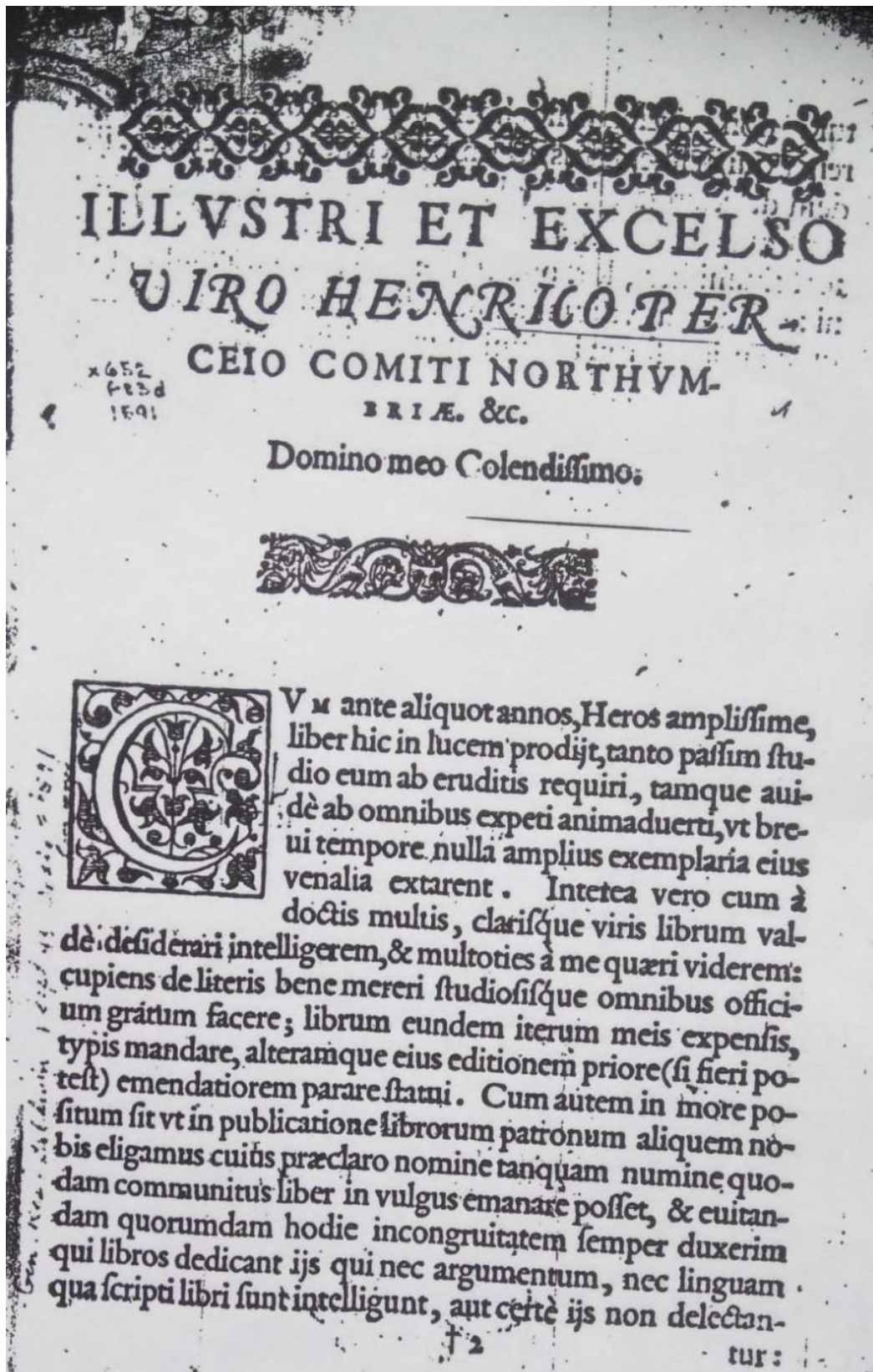


Fig. 9 The dedication page of Giambattista della Porta's *De Furtivis Literarum Notis* (London: printed by John Wolfe, 1591)



EXCELLENTI VIRO
IOANNI SOTO PHILIPPI REGIS
IN HOC REGNO A SECRETIS,
Ioa. Maria Scotus.



Go quidem Sote clarissime in libris, operibusque dedicandis illud in primis observandum arbitror, ut ijs dedicentur, qui sua nos valeant autoritate à quibuscunque obtrectatoribus, defendere, ac tueri. Quod facile assequemur, si delectum aliquem habebimus in libris nuncupandis, ne cuiquam nuncupemus, qui non & ijs vehementer delectetur, & de eisdem gravissimum ferre iudicium minimè posse videatur. Quam in re à compluribus hominibus hac nostra tempestate peccatum esse video, qui haud veriti sunt ingeniorum monimenta quibusdam Principibus consecrare, qui non modò ea non intelligere, aut re vera approbare; sed ne inspicere quidem unquam potuerunt. Longè aliter ego facere semper decreui, vir amplissime, in operibus, quotquot meo sumptu typis excusa in lucem prodibunt: deligamque semper aliquem ex gravissimis viris, iisdemque bene merentibus, cui dedicem.

† 2

quod

Fig. 10 The dedication page of Giambattista della Porta's Falsely Dated *De Furtivis Literarum Notis* (1563: London: printed by John Wolfe, 1591)

The dedication by Bacon to the Earl of Northumberland would seem an appropriate one. The Wizard Earl, the ninth Earl of Northumberland was a profound student of the occult arts. His London residence was transformed into a scientific academy attracting all the great scientists and mathematicians of the day among them Dee and Bacon. Some two centuries later there was discovered at Northumberland House (at that time in the ownership of his ancestor Earl Percy, afterwards the Duke of Northumberland) what has come to be known as the Northumberland MSS that originally contained several of Bacon's writings among them his Shakespeare plays *Richard II* and *Richard III*.⁶²

On the outer-cover of The Northumberland Manuscript the name of Bacon/Francis Bacon and his pseudonym Shakespeare/William Shakespeare are scribbled on more than a dozen occasions. Down the left side appears *Honorificabilitudine* a variant of the long word *honorificabilitudinitatibus* in *Love's Labour's Lost* (5:1:41). Further down the page we are met with the entry 'revealing day through every crany peepes and see Shak', line 1086 of *The Rape of Lucrece* 'revealing day through every cranny spies'. In particular above the entry for Bacon's Shakespeare play *Richard II* appears the entry 'By Mr. ffrauncis William Shakespeare' and further down the word 'Your' is twice written across his pseudonym William Shakespeare-so it reads 'Your William Shakespeare'.⁶³

After this 1591 edition of *De Fvtivis Literarvm Notis* had been printed off by John Wolfe the title page was altered to correspond with the original 1563 Naples edition, and the dedication to the Earl of Northumberland removed, and in its place a copy of the original 1563 dedication substituted for it, over which was placed a Baconian-Rosicrucian AA headpiece. The first narrative Shakespeare poem *Venus and Adonis* printed by Richard Field in 1593 marked the first appearance of the pseudonym 'William Shakespeare' in print appearing under the dedication to Henry Wriothesley, Earl of Southampton, who was residing at Gray's Inn with Bacon in the years leading up to it, is also adorned with a Baconian-Rosicrucian AA headpiece, appearing at the top of the same dedication page.⁶⁴ The following year saw the publication of the quarto of *A Pleasant Conceited Historie, called The taming of a Shrew* printed by Peter Short wherein above the first page appears the same AA headpiece that is printed over the dedication page in the falsely-dated copy of *De Fvtivis Literarvm Notis* the milestone work on codes and ciphers printed by John Wolfe.⁶⁵

The title page of *A Pleasant Conceited Historie called The taming of a Shrew* has a number of Baconian-Rosicrucian ciphers. The top section contains 10 words and 49 letters: 49-10=39 F. Bacon in simple cipher. The 14 italic words found in the middle and bottom section plus the addition of the date (1+5+9+4)14+19=33 Bacon in simple cipher. In the bottom section there are 84 letters which when added to the addition of the date 84+19=103 Shakespeare in simple cipher. The whole page contains a total of 33 roman words Bacon in simple cipher and 204 letters which minus a single woodcut 204-1=203, a double simple cipher for Francis Bacon (100)/Shakespeare(103). The 47 words 204 letters and the 6 words around the emblem in the woodcut: 47+204+6=257 a double simple cipher for Francis Bacon (100)/Fra Rosicrosse (157). In other words Francis Bacon, Brother of the Rosy Cross, secret author of the Shakespeare works.

A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	U	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F R A N C I S												B A C O N											
6 17 1 13 3 9 18=67												2 1 3 14 13=33											
S H A K E S P E A R E												F R A R O S I C R O S S E											
18 8 1 10 5 18 15 5 1 17 5=103												6 17 1 17 14 18 9 3 17 14 18 18 5=157											

Words

1

2

4

3

10

8

IW 5

3

Letters

1

17

23

8

49

28

24

19

71

Pleasant Conceited

Historie, called The taming
of a Shrew.

As it was sundry times acted by the
Right honorable the Earle of
Pembroke his seruants.



Printed at London by Peter Short and
are to be sold by Cutbert Burbie, at his
shop at the Royall Exchange.

1594.

1
WOOD
CUT
6
WORDS

30

31

23

84

7
IW 9
5
RW 33

Fig. 12 The deciphered title page of *The Taming of A Shrew*

The little known figure Petruccio Ubaldini who worked as an editor and translator for John Wolfe and Richard Field during the years which saw the publication of *De Furtivis Literarum Notis* and *Venus and Adonis* in the previous decades, frequently resided with the Bacon family at Gorhambury and York House. Over a period of more than twenty years, Ubaldini enjoyed a virtually unknown relationship with Bacon and served him as a model for Petruccio in *The Taming of the Shrew*. In the play Petruccio pursues Katherine who shares the Christian name of Bacon's aunt Katherine Cooke Killigrew, the younger sister of his mother, Lady Anne Cooke Bacon. In *The Taming of the Shrew* Katherine has a sister named Bianca, from which can readily be derived the anagrammatic contraction AN BAC pointing to the name Anne Bacon. In the play while able to choose from a countless number of names our concealed dramatist gives Petruccio's father the name of Antonio, the Italian form of the Christian name of his brother Anthony Bacon. He also furnishes its central character Petruccio with several servants two of whom are named Nicholas and Nathaniel the Christian names of his two elder half-brothers (from Lord Keeper Sir Nicholas Bacon's first marriage) Sir Nicholas and Sir Nathaniel Bacon. Seen in its true light the play is a disguised Bacon family affair, a humorous send up by the supreme family poet and dramatist, Francis Bacon-Shakespeare.⁶⁶

Following a twelve year absence abroad working closely with spymaster Walsingham and his brother Francis for the English Secret Service, Anthony Bacon returned to England in February 1592. He immediately went to live with his beloved brother Francis who welcomed him with open arms into his Gray's Inn lodgings built by their father Lord Keeper Sir Nicholas Bacon. With spymaster Walsingham dead the headquarters of the English Secret Service had been transferred to Essex House on the Strand the grand stately residence of the royal favourite Robert Devereux, the second Earl of Essex, to whom Francis introduced Anthony, interlocking their destinies for the next decade.



Fig. 13 Essex House on the Strand, London the Headquarters of the English Secret Service headed by Francis and Anthony Bacon

Under the roof of Essex House, Francis and Anthony Bacon ran a vast domestic and foreign intelligence network of spies and intelligencers operating across the European continent. Working out of Gray's Inn and Essex House, Francis and Anthony also set up a literary workshop with connections to English printers and publishers employing writers, translators, scribes and copyists for distribution of private manuscripts, books, plays, masques and other entertainments. This Bacon-Essex circle included the Earl of Southampton to whom Bacon dedicated *Venus and Adonis* and *The Rape of Lucrece*, Antonio Perez the model for Don Adriana de Armado in *Love's Labour's Lost* with another of its characters named (Anthony Dull) after Anthony Bacon, and the grand master of ciphers Thomas Phelippes. In other words Francis and Anthony Bacon were the joint heads of the foreign and domestic arms of the English Secret Service (which evolved into British Intelligence) which in modern terms would be the equivalent of MI5 and MI6. They were in charge of gathering intelligence domestically and from all over Europe for which they employed a highly organised network of secret agents and spies whose important intelligence and information was invariably conveyed through secret codes and ciphers, with the interception of ciphered correspondence of enemy agents, deciphered by Francis, Anthony, and Thomas Phelippes.



Fig. 14 The Headquarters of MI5 and MI6, London

Their researches into Bacon and ciphers in the Shakespeare poems and play would have made the Friedmans aware of the inward friendship and professional relationship between Bacon and the grand master of ciphers reputedly the greatest cryptanalyst of the period whom they do not even once mention in their fraudulent *The Shakespeare Ciphers Examined*. Some further measure of the secret relationship between Bacon and Phelippes can readily be gleaned from three relatively unknown letters printed in Spedding's standard work *The Letters and Life of Francis Bacon*. These letters dating from c.1592-3 confirm their ongoing long-standing secret hidden relationship. In the first of these written far from prying eyes at his country retreat at Twickenham Park Bacon wrote to Phelippes with an invitation to join him:

I have excused myself of this progress; if that be to excuse,-to take liberty where it is not given. Being now at Twicknam, I am desirous of you company. You may stay as long and as little while as you will; the longer the better welcome. *Otia colligunt mentem*. And indeed I would be the wiser by you in many things; for that I call to confer with a man of your fullness. In sadness, come as you are an honest man. So I wish you all good, from Twicknam Park, this 14th of August, 1592.

Yours ever assured,

FR. BACON.⁶⁷

In a second letter to Phelippes who Spedding points had previously been employed by spymaster Sir Francis Walsingham as a decipherer, in which capacity he continued to work alongside Francis and Anthony Bacon out of Essex House, headquarters of the English Secret Service, he relates Phelippes had been instrumental in procuring secret intelligence from abroad obtained by a secret agent code named 'Mercury':

Sir,

I congratulate your return, hoping that all is passed on your side. Your Mercury is returned; whose return alarmed as upon some great matter, which I fear he will not satisfy. News of his coming came before his own letter, and to other than to his proper servant, which maketh me desirous to satisfy or to salve. My Lord hath required him to repair to me; which upon his Lordship's and mine own letters received I doubt not but he will with all speed perform; where I pray you to meet him if you may, that laying our heads together we may maintain his credit, satisfy my Lord's expectation, and procure some good service. I pray the rather spare not your travail, because I think the Queen is already party to the advertisement of his coming over, and in some suspect which you may not disclose to him. So I wish you as myself, this 15th of September, 1592.

Yours ever assured,

FR. BACON.⁶⁸

This is closely followed by another letter from Bacon to Phelippes, which included a copy of a letter from Bacon to his concealed royal brother Robert Devereux, second Earl of Essex, in which Bacon instructs Phelippes to spare no effort in 'this beginning of intelligence', and further advises him, on how to deal with the earl in this matter:

I send you the copy of my letter to the Earl touching the matter between us proposed. You may perceive what expectation and conceit I thought good imprint into my Lord both of yourself and of this particular service. And as that which is in general touching yourself I know you are very able to make good; so in this beginning of intelligence I pray spare no care to conduct the matter to sort to good effect. The more plainly and frankly you shall deal with my Lord, not only in disclosing particulars, but in giving him *caveats* and admonishing him of any error which in this action he may commit, (such is his Lordship's nature) the better he will take it. I send you also his letter which appointeth this afternoon for your repair to him; which I pray, if you can perform; although if you are not fully resolved of any circumstance, you may take a second day for the rest and show his Lordship the party's letter. If your business suffer you not to attend his Lordship to-day, then excuse it by two or three words in writing to his Lordship, and offer another time.

In haste.

Yours ever assured,

FR. BACON.⁶⁹

The failure by the Friedmans to bring to these letters to the attention of their readers confirming the close inward relationship between Bacon and Phelippes is all the more intolerable because they were very familiar with Spedding's standard *Letters and Life*

of Francis Bacon, in fact they reproduced Spedding's translation of his exposition on ciphers from the *De Augmentis* in *The Shakespearean Ciphers Examined*.⁷⁰

Not only was the relationship of Bacon and Phelippes of some pivotal importance in a book evaluating the merits of Bacon's expertise in ciphers, its studious omission allowed the Friedmans to make a series of misleading statements and neatly closed off a vista of inquiry for those whose principal area of study lay away from Bacon and focused instead in the more general field of cryptology. This resulted in the likes of David Kahn not making the important connection between Bacon and Phelippes, and prevented him from exploring its critical implications, whose seminal landmark *The Codebreakers* virtually single-handedly informed all the publications which sprung up in its wake.

Unfortunately, the Friedmans who were wont to play fast and loose with historical evidence which allowed them to make misleading comments when responding to a statement made by C. P. Bowditch in *The Connection of Francis Bacon with the First Folio of Shakespeare's Plays and with the Books On Cipher of his Time* published by Cambridge University Press, which incidentally was known to Kahn. In this important work Bowditch says that Bacon 'was an expert decipherer himself and was employed by the Queen in unearthing several conspiracies in which cipher abounded.'⁷¹ A claim the Friedmans necessarily derided. Taking their lead from Elizabeth Wells Gallup's observation that Bacon had 'an absorbing passion' for ciphers and cipher writing, the Friedmans abandoned any pretence to scholarly integrity with a series of misleading, false and fraudulent statements:

As for Bacon's 'absorbing passion' for ciphers or his practical experience of cryptology in government business, we have only the temperate reference in the *De Augmentis* to warrant the assumption. Of writers on Bacon only one, to our knowledge, claimed that Bacon was a government-employed cryptanalyst; this writer, Charles P. Bowditch, said Bacon was 'an expert decipherer himself and was employed by the Queen in unearthing several conspiracies in which cipher abounded.' There is no evidence for this statement, other than that provided by Mrs Gallup; she produced a testimony 'by Bacon' that he had deciphered messages proving that Mary Queen of Scots was aiming at the British throne. Bacon's 'father' (the Earl of Leicester) was implicated in the plot; and it was plainly a bad moment for all four. The story is entertaining, but hardly evidence of Bacon's absorbing passion for cryptography; and it is arguing in a circle to take it as evidence.⁷²

Their manuscript version of the work also contains the following statement:

....biographers of Francis Bacon do not suggest that he was ever engaged in practising cryptography as a serious occupation or avocation. Although he accompanied Sir Amyas Paulet, English ambassador to France, on one occasion and remained in Paris for nearly two years, there is nothing to indicate that Bacon served as a cipher clerk to Sir Amyas.⁷³

Let us first remind ourselves of the statement made by professors Jardine and Stewart in their modern biography *The Troubled Life of Francis Bacon* which was based upon primary archival records, manuscripts and documents:

It was in France that Francis had his first experience of ciphers and cryptography, which were to play such an important role not only in his later life, but also in his posthumous reputation as the shadowy figure whose authorial identity is cryptically contained in anything from the works of Shakespeare to the Rosicrucian manifesto. In this field, he was lucky to strike up an early relationship with the grand master of intelligence ciphers, Thomas Phelippes...

....What Francis learned under Thomas Phelippes remained with him for the rest of his life.⁷⁴

In his standard *Letters and Life of Francis Bacon* (with which the Friedmans were intimately familiar) his great editor and biographer James Spedding plainly indicates that both Francis and Anthony were directly involved in deciphering letters for Essex, intelligence which in some cases would have been passed on to Elizabeth:

In both these countries Essex had correspondents, in his intercourse with whom Anthony Bacon appears to have served him in a capacity very like that of a modern under-secretary of state; receiving all letters, which were mostly in cipher, in the first instance; forwarding them (generally through his brother Francis's hands) to the Earl, deciphered and accompanied with their joint suggestions; and finally, according to the instructions thereupon returned framing and dispatching the answers. The three thus together formed a kind of small Foreign Office, the business of which seems to have grown so rapidly in extent, importance, and credit with the Queen, that before the end of the year "all matters of intelligence" were reported to be "wholly in the Earl's hands."⁷⁵

There is no doubt whatsoever that Bacon possessed considerable cryptanalytic skills which he acquired as a young man in Paris with England's great cryptanalyst Thomas Phelippes at the English embassy and the Walsingham's London Cipher School that he regularly put to good use in the years and decades ahead as the head of the English Secret Service. In their *Troubled Life of Francis Bacon* professors Jardine and Stewart describe how Bacon was called upon to decipher the diplomatic dispatches relating to the notorious Roderigo Lopez trial in 1594:

The paperwork was enormous: Waad reported 'very many Spanish and other foreign letters which must be translated and abstracted'. Some of those were in cipher, and Francis Bacon was among those brought in to use the skills he had acquired in diplomatic service with Sir Amias Paulet to crack the codes.⁷⁶

In addition to overseeing the cipher department of the English Secret Service and his personal cryptanalysis of the ciphered correspondence in the Lopez trial, throughout 1594 Bacon was also active in directing the magnificent Christmas Gray's Inn Revels that saw the premier of his Shakespeare play *The Comedy of Errors*. The performance of the play took place on 28 December in front of a 'great presence of Lords, Ladies, and worshipful Personages'.⁷⁷ For the next important Grand Night on 3 January 1595 Bacon invited a special number of great and noble personages, among them his uncle Sir William Cecil, Lord Burghley, the model for Lord Humphrey, Duke of Gloucester in 2 *Henry VI* and Polonius in *Hamlet* and his son Sir Robert Cecil, painted to the life as the titular character in *Richard III*; Henry Wriothesley, the Earl of Southampton to whom Bacon dedicated his two Shakespeare poems *Venus and Adonis* (1593) and *The Rape of Lucrece* (1594); his concealed royal brother Robert Devereux, second Earl of Essex whose spectral presence is felt in *Richard II*, *The Merchant of Venice*, *Henry V*, *Hamlet*, *Troilus and Cressida*, *Coriolanus* and the poem *The Phoenix and the Turtle*; and Henry Percy, Earl of Northumberland to whom the milestone work on codes and ciphers *De Fvtivis Literarvm Notis* (1591) was dedicated and where at the residence of his descendant Bacon's so-called Northumberland Manuscript was later discovered that once held copies of his Shakespeare plays *Richard II* and *Richard III*.⁷⁸

In front of these distinguished guests in echoing *The Comedy of Errors* at the end of the (Rosicrucian-Freemasonic) masque the Prince of Purple placed around the neck of the Inner Temple's ambassador a carcanet or bejewelled collar the Golden Chain of Being, the symbol of 'the Knighthood of the Helmet, an Order of his own Institution', and twenty-four of his retinue all vowed to observe and practice the Constitutions and

Ordinances of the Honourable Order.⁷⁹ When the King-at-Arms had read the Articles of the Order of the Knighthood and concluded all its ceremonies, the Knights of the Order, brought into the hall a banquet for the Prince of Purple and Lords in imitation of the Feast celebrated at all such honourable institutions. Then a table was set on the stage before the Prince and the six Lords of his Privy Council all delivered speeches written by Bacon for this special occasion: *Advising the Exercise of War; the Study of Philosophy; the Eternizement and Fame by Buildings and Foundations; Absoluteness of State and Treasure; Virtue and a Gracious Government; and Persuading Pastimes and Sports*.⁸⁰ In his ground-breaking and revelatory *Francis Bacon's Personal Life Story* Alfred Dodd, a longstanding senior Freemason, who wrote a series of works on Bacon and his Rosicrucian-Freemasonry Brotherhood, explains that *The Order of the Helmet* provides 'a direct clue' to his 'secret activities':⁸¹

There is not the slightest doubt that this entertainment was based on an actual ceremonial akin to the Rites of Freemasonry. It was intended to be simply a COVER-an open recital that might constitute a record for posterity-of unsuspected, unknown, and secret organizations already in existence, the Rosicrosse Literary Society, the Rosicrucians and the Freemasons.⁸²

As well as the premier of *The Comedy of Errors*, numerous Shakespeare scholars have maintained that *Love's Labour's Lost* was also intended for performance at the Gray's Inn Revels on one of two other planned Grand Nights to celebrate the return of the Prince of Purple from his visit to Russia which was cancelled because the scaffold for the stage had been removed and taken away.⁸³ The comedy *Love's Labour's Lost* is set in Navarre a kingdom between France and Spain, at a time when Bacon was in Paris and France, when some of the historical events referred or alluded to in the play were happening, and it was at Navarre where his brother Anthony Bacon, an intimate friend and correspondent of King Henry of Navarre, spent several years of his life.⁸⁴ It was (among other reasons) most probably out of respect for a living king that Bacon named the monarch *Love's Labour's Lost* Ferdinand, King of Navarre and why the Princess of France (modelled on the French princess Marguerite de Valois, Queen of Navarre and Queen of France (with whom Bacon had a secret love affair) is not given a name in the play.

The lords attending the King of Navarre in *Love's Labour's Lost* namely Berowne, Longueville and Dumaine are named after historical persons-Duc de Biron and Duc de Longueville, military leaders and loyal servants of Henry of Navarre, and Geraud de Lomagne, a Huguenot commander or Duc de Mayenne, who made the peace with Henry Navarre, then Henry IV of France, in 1595. With Boyet, attending the Princess of France in the play, named after another of King Henry's lords named Boyresse. In the early part of the twentieth century (though never mentioned by Shakespeare scholars and editors of the play) A. Chambers Buntin discovered the passports of Anthony Bacon and his train which provided them with the necessary official permission to travel through Navarre and parts of France, signed by Biron, Lomagne and Boyresse.⁸⁵ The names of several other characters in the play are also of considerable interest. The character Don Adriano de Armado is based upon the notorious Antonio Perez, a Spanish statesman and secretary of King Phillip II who left Spain in November 1591, and twice travelled to England as an envoy to King Henry IV of France (formerly King Henry of Navarre) in April and July 1593, where he formed a close and intimate friendship with Francis and Anthony Bacon, remaining in England until July 1595.⁸⁶ If this was not enough, Bacon named two of the other characters in *Love's Labour's Lost*, Anthony Dull and Sir Nathaniel, after his two

brothers, Anthony Bacon, himself an important secret source of information for the play, and his elder half-brother Sir Nathaniel Bacon, who may well have seen him off to France all those years earlier.

On the outer-cover of Bacon's collection known as *The Northumberland Manuscript* where there are at least a dozen scribbled variants of his name *Baco*, *Bacon*, *Francis Bacon* along with his pseudonym *Shakespeare* or *William Shakespeare* appears the word '*Honorificabilitudine*' a shortened version of '*honorificabilitudinitatibus*' that is met with in *Love's Labour's Lost* (5:1:41).⁸⁷ This long word appears in the scene with Anthony Dull (Anthony Bacon), the curate Sir Nathaniel (Sir Nathaniel Bacon) with the schoolmaster Holofernes (identified by some as Gabriel Harvey one of Bacon's tutors at Cambridge) which begins with an hilarious criticism of Armado's (Antonio Perez with whom Bacon had an intimate relationship) verbosity, speech patterns and pronunciations. Armado arrives with Costard and Moth who participate in the banter. In an aside to Armado's page boy Moth, Costard (perhaps a humorous skit on Lady Anne Cooke Bacon) says 'I marvel thy master hath not eaten thee for a word, for thou art not so long by the head as *honorificabilitudinitatibus* (5:1:39-41). In this passage littered with Latin words and phrases Armado asks Holofernes 'are you not lettered?' (5:1:44) to which Mote answers:

Yes, yes, he teaches boys the horn-book. What is
'a, b' spelled backward, with the horn on his head?
[*Love's Labour's Lost*: 5:1: 45-6]

The Latin for horn is cornu thus A B spelt backwards is BACONU, i.e., meaning [U] YOU BACON YOU. On page 136 of the First Folio 'What is Ab speld backward with the horn on his head' is printed on the 33rd line: 33 being Bacon in simple cipher.⁸⁸

It has been suggested the first version of the play was designed for a performance at the house of Henry Wriothesley, third Earl of Southampton in 1593 or 1594, around the time Bacon dedicated to him his Shakespeare poems *Venus and Adonis* and *The Rape of Lucrece* with a revised version of the play acted before Queen Elizabeth at court a few years later. Wherever it was first acted we can be tolerably certain that in its audience was its author Francis Bacon and his brother Anthony Bacon, joint heads of the English Secret Service, and with confidence the Earl of Essex, whose London residence on the Strand was the headquarters of the English Secret Service where the play may have been first performed, the other key member of the Bacon-Essex circle the Earl of Southampton, the grand master of cryptology, Thomas Phelippes, as well as other spies and intelligencers. When in the fifth Act the lines 'Yes, yes, he teaches boys the horn-book. What is 'a, b' spelled backward, with the horn on his head?' they must of all have been rolling in the aisles.

In the mid-1590s several of Bacon's essays were already circulating in manuscript prompting him to intervene at the Stationers' Company to prevent an unauthorized edition. On 24 January 1597 one Richard Serger entered into the Stationers' Register 'a book entitled *ESSAYES* of M.F.B. *with the prayers of his Sovereigne*'.⁸⁹ In order to prevent its publication Bacon took immediate action and on 5 February a new entry appeared in the Stationers' Register assigning the right to publish to Humfrey Hooper 'Entered for his copie under th[e] [h]andes of Master FRAUNCIS BACON...A booke intituled *Essaies, Religious meditations, Places of Perswasion and Disswasion* by master FRAUNCIS BACON'.⁹⁰ The unauthorized entry by Serger was cancelled by order of the whole Stationers' Court on 7 February and within a week or so from this date Bacon's own authorized edition was on sale.⁹¹ This was the first openly published

book by Bacon with his name to it which he dedicated to his brother and fellow head of the English Secret Service Anthony Bacon:

To M. Anthony Bacon *his deare Brother.*

Louing and beloued Brother, I doe nowe like some that haue an Orcharde il neighbored, that gather their fruit before it is ripe, to preuent stealing. These fragments of my conceites were going to print; To labour the staie of them had bin troublesome, and subiect to interpretation; to let them passe had beene to adve[n]ture the wrong they mought receiue by vntrue Coppies, or by some garnishment, which it mought please any that should set them forth to bestow them. Therefore I helde it best discreation to publishe them my selfe as they passed long agoe from my pen, without any further disgrace, then the weaknesse of the Author. As I did euer hold, there mought be as great a vanitie in retiring and withdrawing mens conceites (except they bee of some nature) from the world, as in obtruding them: So in these particulars I haue played my selfe the Inquisitor, and find nothing to my vnderstanding in them contrarie or infectious to the state of Religion, or manners, but rather (as I suppose) medicinable. Only I disliked now to put them out because they will be like the late new halfe-pence, which though the Siluer were good, yet the peeeces were small. But since they would not stay with their Master, but would needes trauaile abroad, I haue preferred them to you that are next to myself, Dedicating them, such as they are to our loue, in the depth whereof (I assure you) I sometimes wish your infirmities translated uppon my selfe, that her Maiestie mought haue the seruice of so actiue and able a mind, & I mought be with excuse confined to these contemplations & studies for which I am fittest, so commende I you to the preseruacion of the diuine Maiestie. From my Chamber at Graies Inne, this 30. Ianuarie. 1597.

Your entire and Louing brother.

Fran. Bacon.⁹²

As one might expect from a serious expert in codes and ciphers for a work written by one joint head of the English Secret Service and dedicated to another, its title page is ciphered, using his Simple Cipher System. The whole title page has 29 words and 4 digits: 29+4=33 Bacon in simple cipher. The 29 words added to 73 letters in the top half of the title page produces a total of 102 which minus the 2 words printed in block capitals ('IN LONDON') equals 100 Francis Bacon in simple cipher and conversely 102 plus the one woodcut 102+1=103 Shakespeare in simple cipher. The whole page contains a total of 29 words and 149 letters which minus the single woodcut gives us a total of 177 William Shakespeare in simple cipher. Furthermore, the 149 letters plus the 11 words in the top half of the page minus the 2 words in block capitals and the single woodcut give us a total of 157 Fra Rosicrosse.

A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	U	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

F	R	A	N	C	I	S	B	A	C	O	N
6	17	1	13	3	9	18=67	2	1	3	14	13=33

W	I	L	L	I	A	M	S	H	A	K	E	S	P	E	A	R	E
21	9	11	11	9	1	12=74	18	8	1	10	5	18	15	5	1	17	5=103

F	R	A	R	O	S	I	C	R	O	S	S	E
6	17	1	17	14	18	9	3	17	14	18	18	5=157

Words		Letters
1	Essayes.	7
2	Religious Meditations.	20
4	Places of perswasion and	21
1	disswasion.	10
3	Scene and allowed.	15
		73
		woodcut
2	At London,	8
6	Printed for Humfrey Hooper, and are	29
7	to be sold at the blacke Beare	24
3	in Chauncery Lane.	15
4 date	1597.	149
33		

Fig. 15 The deciphered title page of Bacon’s 1597 edition of his *Essays*

Throughout the 1590s the enormous crippling costs of running the English Secret Service out of Essex House employing secret agents, spies, and intelligencers resulted in Francis and Anthony Bacon entering into a never ending cycle of debt incurred by having to raise loans from moneylenders against various properties and lands through bonds and other legal instruments.⁹³ The Bacon brothers were dealing with complex loans and mounting debts when in Trinity Term 1597 a goldsmith and money-lender Sympson who held a bond for £300 principal sued Francis for repayment but agreed to respite the satisfaction of it until the beginning of the following term. However without any warning a fortnight before Michaelmas Term began, Bacon while walking from the Tower of London on Her Majesty's Secret Service, at the instigation of the money-lender Sympson he was served with an execution and arrested with a view to having him confined to the Fleet. He managed to send a message to his friend Sheriff More who intervened on his behalf and generously provided him with more congenial surroundings in a house in Coleman Street. From here Bacon immediately sent word to the Earl of Essex, and despatched two letters-one to his cousin Secretary of State Sir Robert Cecil and the other to the Lord Keeper Sir Thomas Egerton.⁹⁴ By this time Anthony Bacon had sold off or mortgaged all his property and land and got deeper into debt, as the two brothers used up all their financial resources, running the English Secret Service. As was invariably the case Anthony presumably made arrangements to settle the debt and interest in full, whose purse and credit, was always at the service of his beloved brother, whom he loved more than all the world and life itself. These events were to inform and colour *The Merchant of Venice* whose titular character is named Antonio, the Italianate form of Anthony named after and modelled on Anthony Bacon with the character of Bassanio a disguised characterisation of its author Francis Bacon. In the play these characters Antonio and Bassanio mirror the relationship and circumstances of Francis and Anthony Bacon before and during the time the play was written and revised through 1597-8 and first published in 1600.⁹⁵

Virtually all non-specialists, literary scholars and members of the reading public, who are not well-versed in cryptology, usually believe that all codes and ciphers in general are extremely difficult to decipher, which is certainly the case, with some of the more sophisticated and complicated ones. On the other hand, some codes and ciphers were highlighted and their significance contextualised and explained, are surprisingly easy to follow and understand. There are many examples hidden in plain sight of Baconian ciphers, codes, anagrams and acrostics spread over the entire Shakespeare canon, and *The Merchant of Venice* is no exception from which one or two examples will suffice.

The play begins with the stage direction '*Enter Antonio, Salerio, and Solanio*' with Antonio in its opening line saying that he felt unaccountably sad 'In sooth, I know not why I am so sad' (1:1:1) and refuses to be cheered up by Salerio and Salanio. Antonio denies that he is worried about the safety of his merchant ships. 'Why then', suggests Solanio 'you are in love' to which Antonio replies, 'Fie, fie' (shame on you). Salerio then goes on to say:

Not in love neither? Then let us say you are sad
Because you are not merry, and 'twere as easy
For you to laugh, and leap, and say you are merry
Because you are not sad. Now, by the two-headed Janus,
Nature hath framed strange fellows in her time.

[*The Merchant of Venice*: 1:1: 47-51]

In the passage Antonio is linked with Janus the Roman god of beginnings and endings as well as duality, transitions and gateways. According to mythology Janus had two faces-one looking forward to the future and one looking back to the past. Now look again at the passage wherein its author has secretly incorporated a near anagram of his name upwards and downwards: F Becon from the letter F upwards and F Becon from the letter F downwards (my italics).⁹⁶ The name Bacon is a derivation of Beacon.

A few more lines later Bacon disguised as Bassanio alludes to his private and secret history with Anthony, in the character of Antonio, to whom, he says, he owes most in money and love:

BASSANIO

'Tis not unknown to you, Antonio,
How much I have disabled mine estate
By something showing a more swelling port
Than my faint means would grant continuance,
Nor do I now make moan to be abridged
From such a noble rate; but my chief care
Is to come fairly off from the great debts
Wherein my time, something too prodigal,
Hath left me gaged. To you Antonio,
I owe the most in money and in love,
And from your love I have a warranty
To unburden all my plots and purposes
How to get clear of all the debts I owe.

ANTONIO

I pray you, good Bassanio, let me know it,
And if I stand as you yourself still do,
Within the eye of honour, be assured
My purse, my person, my extremest means
Lie all unlocked to your occasions.

[*The Merchant of Venice*: 1:1:122-39]

In the play Antonio repeatedly assures Bassanio of his love and tells him that even if he had used up all his money, he would still lend him more money; and like a true friend, Antonio says, simply tell me what you would like me to do, and it will be done. Bassanio tells Antonio that he wants to woo Portia 'a lady richly left' who lives in Belmont. As Antonio's funds are all tied up in his ships at sea he presently lacks the money to fund Bassanio's courtship of Portia but promises to stand security for him to borrow on his credit and authorises him to raise money in his name. In Venice Bassanio seeks out the Jewish money-lender Shylock who agrees to loan Bassanio 3,000 ducats for 3 months, with Antonio standing as guarantee:

SHYLOCK

Three thousand ducats. Well.

BASSANIO

Ay, sir, for three months.

SHYLOCK

For three months. Well.

BASSANIO

For the which, as I told you, Antonio shall be bound.

SHYLOCK

Antonio shall become bound. Well.

BASSANIO

May you stead me? Will you pleasure me? Shall
I know your answer?

SHYLOCK

Three thousand ducats for three months,
and Antonio bound.

[*The Merchant of Venice*: 1:3:1-10]

It will be recalled that Bacon owed the notorious money lender Simpson of Lombard Street £300 and the character portraying Bacon in the play Bassanio wishes to borrow 3,000 for 3 months the amount and period of time selected for the purposes of a secret signature or cipher. If the 3 nulls '0's' are dropped from the number 3,000 it leaves the number 3 which placed with the number 3 from the period of 3 months, we have the number 33 Bacon in simple cipher.

The first quarto edition of *The Most excellent Historie of the Merchant of Venice* was printed in 1600 and the following year sometime in May 1601 the man on whom its titular character was based died. Up until March 1600 when Queen Elizabeth ordered that everyone leave, Anthony Bacon resided at Essex House, the headquarters of the English Secret Service and befitting the Chief of the Secret Intelligence Service he passed quietly away in mysterious circumstances. How he died, where he died, and the precise date of his death still remain unknown, and until recently the place of his burial proved elusive. He was according to the register entry of St Olave's in Hart Street buried there on 17 May 1601 in the chamber within the vault:

The fact that the entry is so brief, that Francis makes no mention of the death amongst his papers, that no will has been traced, suggests that Anthony may have been buried secretly, at night...But the reason for the secrecy must remain surmise...

On May 27th John Chamberlain, writing from London to his friend Dudley Carleton, said, "Anthony Bacon died not long since but so far in debt, that I think his brother is little the better by him." This was all the contemporary world heard of the death, then or afterwards. The administration of his estate was not granted to Francis until June 23rd 1602, over a year later. "On the last day but one a commission was granted to Francis Bacon, esquire, natural and legal brother of Anthony Bacon, formerly of the parish of St Olave in Hart Street in the City of London, for the good administration of the goods, rights and credits of the deceased in the person of Francis Walleys, notary public, who took oath on his behalf."⁹⁷

In the early months of 1601 the final act in the Tudor tragedy was just beginning to play out its last throes with its inevitable consequences of blood, death and destruction marking the end of one of the most remarkable periods in English history nothing less than the end of the Tudor dynasty. Throughout her reign the ageing queen had lived a long double life. A public life masquerading as the so-called Virgin Queen married to England and a private secret life as a not so-Virgin Queen who had secretly married Robert Dudley, Earl of Leicester with whom she had two children the eldest known to the world as Francis Bacon and the other as Robert Devereux, second Earl of Essex. Without informing and overlooking the prior right of his elder brother as rightful heir to the throne, the frustrated and desperate Robert Tudor Devereux realising Elizabeth was now unlikely to recognise his elder brother Francis, or himself, as her Tudor heirs decided upon seizing the reins of state by force in an ill-conceived *coup d'etat*. It was this lack of public acknowledgement by Queen Elizabeth of his secret royal birth with its hereditary right to the throne that was the true cause and impulse of his rebellion

and one which cost him his life. On 25 February 1601 Bacon's brother the concealed royal prince Robert Tudor Devereux was beheaded on Tower Green and as the life of her son ebbed away his mother Queen Elizabeth Tudor sat playing her virginals.

During the last two years of her life the ageing Queen Elizabeth descended into a state of depression and melancholy as the execution of her son Robert Tudor increasingly took its toll on her. Reduced to a shattered shell wrecked with grief and guilt without love and any more hope in this world she cried out for Dudley and their son Essex in full realisation that she had executed her own flesh and blood. She finally died at Richmond Palace on 24 March 1603. All the secrets of her private life were known to her other royal son Francis Tudor Bacon and following her death all kinds of memories of his mother agitated and haunted his mind which found expression in the greatest play in all world literature.

It is no coincidence that in the year Queen Elizabeth died the first quarto edition of the royal tragedy of *Hamlet* appeared in a text amounting to 2,200 lines. During 1603 Bacon subjected the play to a thorough examination and revision and with his royal mother now well and truly dead a much revised and enlarged second quarto of *Hamlet* appeared in 1604 containing around 3,800 lines, in a play which obliquely portrays hidden in plain sight, some of the most explosive secrets of the Elizabethan reign.

The Tragedy of Hamlet is Francis Bacon Tudor telling his own secret and hidden story. It is partly a succession play which represents his fears and anxieties about the passing of his true mother Queen Elizabeth and the exhaustion of a royal dynasty with Bacon having to face up to the reality of the extinction of his own House of Tudors. Through the play he discloses the unrecorded history of his own private secret life as a concealed Tudor Prince and heir to the throne of England with its players being 'the abstract and brief chronicles of the time.' It obliquely and vividly tells the tale of its author a disinherited royal prince Francis Tudor Bacon in the shape of Hamlet who is denied his rightful kingship by his mother Queen Elizabeth (Queen Gertrude) with a supporting dramatis personae of the most powerful figures of the Elizabethan era: her secret husband Robert Dudley, Earl of Leicester (King Claudius), Robert Devereux, second Earl of Essex (Laertes), Bacon's foster-father Sir Nicholas Bacon (the Ghost of Old Hamlet) and his uncle Sir William Cecil (Polonius).⁹⁸

The carefully formatted title pages of both the 1603 and 1604 quarto of *The Tragical Historie of Hamlet Prince* secretly include a number of Baconian-Rosicrucian ciphers. If we look closely at the upper section of the title page of the 1603 edition we see that the first five lines have been printed in three different types: block roman, ordinary roman, and italic. This is, of course, no accident. This top section contains a total of 64 letters that when added to the 3 words printed in italic $64+3=67$ Francis in simple cipher. It also contains 39 ordinary roman letters: 39 F. Bacon in simple cipher. The middle section has 28 words comprising of 129 letters: $28+129=157$ Fra Rosicrosse in simple cipher and if the 129 letters are added to the four digits in the date $129+4=133$ this yields a double simple cipher for Francis Bacon (100)/Bacon (33). The 35 letters in the bottom section plus the four digits in the date: $35+4=39$ F Bacon in simple cipher. In total the whole page contains 48 words and 228 letters and 1 woodcut: $48+228+1=277$ a split simple cipher for Francis Bacon (100)/William Shakespeare (177). The top section of the 1604 quarto edition of *Hamlet* also contains a total of 64 letters that when added to the 3 words printed in italic $64+3=67$ Francis in simple cipher and 39 ordinary roman letters F. Bacon in simple cipher. The 16 italic letters and 6 roman capital letters added to the 11 words: $16+6+11=33$ Bacon in simple cipher. The middle section has 19 words containing 86 letters: $86-19=67$ Francis in simple cipher. The 23 words and 78 ordinary letters in the bottom section $78+23=101$ minus 1 woodcut

Words

L ORL
3

1

3

1

3

$\frac{3}{11}$

11

11

$\frac{6}{28}$

28

T H E
Tragicall Historie of
H A M L E T
Prince of Denmarke

By William Shakeſpeare.

As it hath beene diuerſe times acted by his Highneſſe ſer-
uants in the Cittie of London : as alſo in the two V-
niuerſities of Cambridge and Oxford, and elſe-where



At London printed for N.L. and Iohn Trundell.
1603.

9

$\frac{9}{48W}$

19 19

6

16 3 IW

20 20

$\frac{64}{39}$

47

39

43

$\frac{129}{129}$

1
woodcut

35

$\frac{4 \text{ date}}{39}$

228 L

Fig. 16. The deciphered title page of the 1603 edition of *Hamlet*



The Tragicall Historie of
H A M L E T
Prince of Denmarke.

Enter two Centinels.

1. **S**Tand: who is that?
2. **T**is I.

1. O you come most carefully vpon your watch,

2. And if you meete *Marcellus* and *Horatio*,
The partners of my watch, bid them make hafte.
1. I will: See who goes there.

Enter Horatio and Marcellus.

Hor. Friends to this ground.

Mar. And leegemen to the Dane,

O farewell honest fouldier, who hath releued you?

1. *Barnardo* hath my place, giue you good night.

Mar.

Fig. 17 The first page of the 1603 edition of *Hamlet*

Words		RL	IL
1			
3			3
		19	
1			
3		6	
			16
3		20	
11		64	
8		39	
10		41	
1		6	
19		86	
			1
			woodcut
2		2	block
14		w	
		35	
6		32	
1			
23		11	
		78	

THE
Tragicall Historie of
HAMLET,
Prince of Denmarke.

By William Shakespeare.

Newly imprinted and enlarged to almost as much
again as it was, according to the true and perfect
Coppie.



AT LONDON,
Printed by I. R. for N. L. and are to be sold at his
shoppe vnder Saint Dunstons Church in
Fleetstreet. 1604.

Fig. 18 The deciphered title page of the 1604 edition of *Hamlet*



The Tragedie of
H A M L E T
Prince of Denmarke.

Enter Barnardo, and Francisco, two Centinels.

Bar. **VV** hose there?
Fran. Nay answere me. Stand and vnfolde your selfe.
Bar. Long liue the King,
Fran. *Barnardo.*

Bar. Hee.

Fran. You come most carefully vpon your houre,

Bar. Tis now strooke twelfe, get thee to bed *Francisco,*

Fran. For this reliefe much thanks, tis bitter cold,

And I am sick at hart.

Bar. Haue you had quiet guard?

Fran. Not a mouse stirring.

Bar. Well, good night:

If you doe meete *Horatio* and *Marcellus,*

The riuals of my watch, bid them make hast.

Enter Horatio, and Marcellus.

Fran. I thinke I heare them, stand ho, who is there?

Hora. Friends to this ground.

Mar. And Leedgemen to the Dame,

Fran. Giue you good night.

Mar. O, farwell honest souldiers, who hath relieu'd you?

Fran. *Barnardo* hath my place; giue you good night.

Exit Fran.

Mar.

B.

Fig. 19 The first page of the 1604 edition of *Hamlet*

produces a total of 100 Francis Bacon in simple cipher and conversely 101 plus the 2 words in block capitals totals 103 Shakespeare in simple cipher.

Furthermore various cryptic Baconian devices are carried over to the first pages in the 1603 and 1604 quarto editions. Above the top of the first page of the 1603 quarto appears the Baconian AA headpiece an enigmatic symbol of darkness and light where secrets are at once concealed and revealed to the initiated or to those with eyes to see. Over the top of the first page of the 1604 quarto appears another enigmatic headpiece. In the centre of the headpiece we see what appears to be a coat of arms, reminiscent of a royal coat of arms, with two figures either side of it, possibly representing Queen Elizabeth and Robert Dudley, Earl of Leicester looking to and reaching for something resembling a crown. To the bottom right and left two children are depicted possibly denoting the concealed royal heirs Francis Tudor Bacon and Robert Tudor Devereux. The child on the left representing Life and the child on the right behind whom appears the grim reaper representing Death, the light and dark twin central themes of the play.

It will be seen that on the first page of the 1603 edition appears the stage direction '*Enter two Centinels*' and in the 1604 edition the stage direction '*Enter Barnardo, and Francisco, two Centinels*'. It will be noticed that in both instances the word *Centinels* is spelt with a capital C instead of an S (*OED*: *Sentinel*, a sentry or lookout who keeps guard over someone/something). The Roman numeral C represents 100 the equivalent of Francis Bacon in simple cipher and the letter C is the 3rd letter in the alphabet thus 2 C's or a double C (3 and 3) placed together represents 33 Bacon in simple cipher.⁹⁹

The first scene of *Hamlet* is set in darkness at midnight with its associated themes of secrecy and identity. The pregnant stage direction '*Enter Barnardo, and Francisco, two Centinels*' is followed by Barnardo asking Francisco the profoundly meaningful question in the first line of the play 'Who's there?' (1:1:1). The name Francisco is the Spanish and Portuguese form of the masculine name Franciscus (the baptismal entry for Bacon in St Martin-in-the Fields reads '*Franciscus Bacon*') corresponding to the English name Francis.¹⁰⁰ The name of the sentinel Francisco (Francis) set alongside the chosen name of the other sentinel Barnardo (Barnard/Bernard in English) is doubly significant. The two names placed together as Francis Barnard possess the Christian name of Bacon, and the initials of Francis Bacon. The names *Francisco* and *Barnardo* also contain an anagram of Francis Bacon. To the question then 'Who's there', the answer is Francis Bacon, secret concealed author of *The Tragical Historie of Hamlet, Prince of Denmark*:

Enter Barnardo, and Francisco, two Centinels.

BARNARDO Who's there?

FRANCISCO Nay, answer me. Stand and unfold yourself.

BARNARDO Long live the King!

FRANCISCO Barnardo?

BARNARDO He.

FRANCISCO You come most carefully upon your hour.

BARNARDO 'Tis now struck twelve. Get thee to bed, Francisco.

FRANCISCO For this relief much thanks. 'Tis bitter cold,
And I am sick at heart.

BARNARDO Have you had quiet guard?

FRANCISCO Not a mouse stirring.

BARNARDO Well, good night.

If you do meet Horatio and Marcellus,
The rivals of my watch, bid them make haste.

Enter Horatio and Marcellus

FRANCISCO I think I hear them.-Stand! Who's there?

HORATIO Friends to this ground.

MARCELLUS And liegemen to the Dane.

FRANCISCO Give you good night.

MARCELLUS O farewell, honest soldier. Who hath relieved you?

FRANCISCO Barnardo has my place. Give you good night.

Exit Francisco.

[*Hamlet*: 1:1:1-14]

We know after addressing the question 'Who's there?', that it is Francis Bacon hidden behind the disguises and in the names of Francisco and Barnardo. Furthermore, as if having an inner conversation with himself Francisco instructs Barnardo to 'Stand and unfold yourself', to which Barnardo replies to Francisco 'Long live the King!' With the passing of his mother Queen Elizabeth the rightful King of England should be her concealed son Francis Tudor Bacon, Prince of Wales. With the kingship firmly on his mind Francisco then says to Barnardo 'You come most carefully on your hour', a time of passing from one prince to another, one reinforced by Barnardo who identifies the hour 'Tis now struck twelve', denoting not just the passing of one day to another, but the passing of one royal dynasty to another, marking the end of the Tudor dynasty.

The first and second quartos of *The Tragical Historie of Hamlet Prince of Denmark* were being prepared, written and published through the same period by Bacon as his landmark work *The Advancement of Learning*. It appears from a letter to his cousin Secretary of State Sir Robert Cecil (whose own father Sir William Cecil is the model for Polonius in *Hamlet*) that Bacon had already conceived the design of writing the *Advancement* sometime before 3 July 1603. The first of its two books was written in 1603, with the second apparently after an interval hurriedly written in the latter part of 1604, and published in early 1605.¹⁰¹ In the *Advancement* Bacon set out a series of the cipher systems which he later incorporated into his acknowledged writings and quarto and folio editions of his Shakespeare poems and plays:

For CYPHARS; they are commonly in Letters and Alphabets, but may bee in Wordes. The kindes of CYPHARS, (besides the SIMPLE CYPHARS with Changes, and intermixtures of NVLLES, and NONSIGNIFICANTS) are many, according to the Nature or Rule of the infoulding; WHEEL- CYPHARS, KAY- CYPHARS, DOVBLES, &c. But the vertues of them, whereby they are to be preferred, are three; that they be not laborious to write and reade; that they bee impossible to discypher; and in some cases, that they bee without suspition. The highest Degree whereof, is to write OMNIA PER OMNIA; which is vndoubtedly possible, with a proportion Quintuple at most, of the writing infoulding, to the writing infoulded, and no other restraints whatsoever. This Arte of *Cypheringe*, hath for Relatiue, an Art of *Discypheringe*; by supposition vnprofitable; but, as thinges are, of great vse. For suppose that *Cyphars* were well managed, there bee Multitudes of them which exclude the *Discypherer*. But in regarde of the rawnesse and vnskilfulnesse of the handes, through which they passe, the greatest Matter, are many times carried in the weakest *Cyphars*.¹⁰²

The title page of the 1605 edition of *The Advancement of Learning* contains a mixture of simple and kay ciphers. On the top half of the page there are a total of 19 words containing 92 letters: 19+92=111 Bacon in kay cipher. On the bottom half of the page there are 20 words and 79 letters plus 4 digits in the date: 20+79+4=103 Shakespeare in simple cipher. The whole page has a total of 39 words F. Bacon in simple cipher

Words

Letters

1

3

3

13

2

12

5

26

4

23

1

6

3

9

19

92

2

8

5

24

10

33 date

3

14 4

20

79

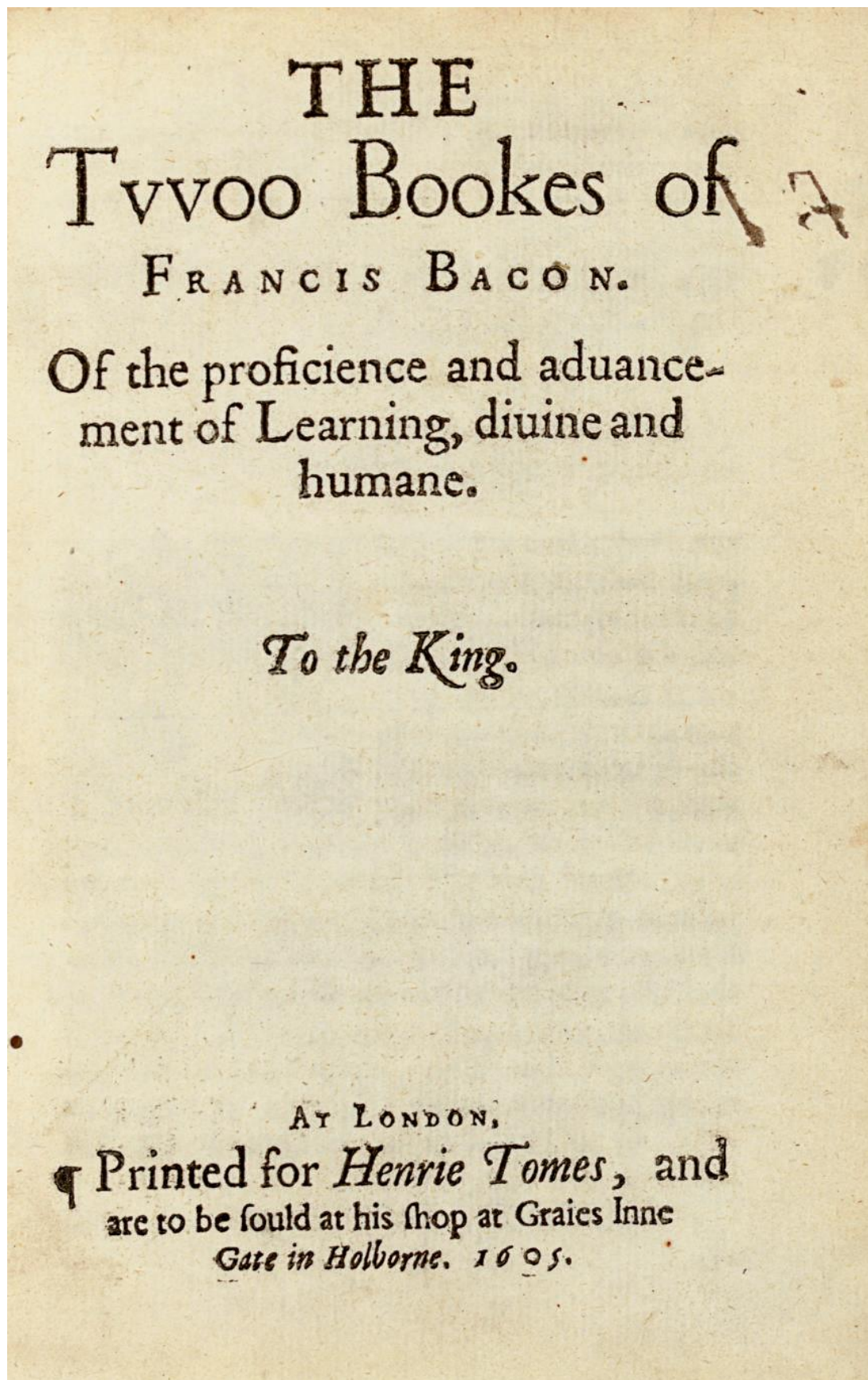


Fig. 20 The deciphered title page of Bacon's 1605 edition of *The Advancement of Learning*

and a total of 171 letters plus the printer's mark 'q' (next to the word 'printed'):
 $39+171+1=211$ a split simple and kay cipher for Francis Bacon (100)/Bacon (111).

SIMPLE CIPHER

A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	U	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

F	R	A	N	C	I	S	B	A	C	O	N
6	17	1	13	3	9	18=67	2	1	3	14	13=33

W	I	L	L	I	A	M	S	H	A	K	E	S	P	E	A	R	E
21	9	11	11	9	1	12=74	18	8	1	10	5	18	15	5	1	17	5=103

KAY CIPHER

A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	U	W	X	Y	Z
27	28	29	30	31	32	33	34	35	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

B	A	C	O	N
28	27	29	14	13 =111

In their printed work *The Shakespeare Ciphers Examined* the fraudulent Friedmans have a single entry on their index for the Jaggards, 'Jaggard, printer, 242', the printers and publishers of the most important publication in the entire Shakespeare canon and the most important and influential secular work in the Western canon of literature in a book examining Shakespeare ciphers! Nor is there moreover a single word relating to the critically important relationship between Bacon and the Jaggards which took place over a period over some decades leading right up to the printing and publishing of the First Folio and beyond it.

In the 1580s William Jaggard served his apprenticeship under the distinguished printer Henry Denham, a former apprentice of the printer and publisher Richard Tottell, who was known to Lord Keeper Sir Nicholas Bacon, and whose son William Tottell, had a long and close relationship with Francis Bacon, and served under him as one of his six Clerks of Chancery. His brother John Jaggard was apprenticed to Richard Tottell on 19 October 1584 for a term of about seven years. It was most likely the late 1580s which marked the first contact or beginnings of the concealed relationship between Bacon and the Jaggards when they were still serving their apprenticeships with Henry Denham and Richard Tottell, both of whom Bacon, during the period of the 1580s and 1590s, was privately and professionally in regular contact. His relations with William and John Jaggard continued through to the Jacobean reign when the Jaggard family became involved over a period of two decades in the printing and publishing of Bacon's essays.

It is not known in what circumstances and precisely at what date the copyright of Bacon's *Essays* passed to John Jaggard but as Bacon had been in close and regular contact with William and John Jaggard for many years if not decades the arrangement for the transfer of copyright from Humfrey Hooper to John Jaggard was most likely conducted behind closed doors at Bacon's private residence:

It is not impossible that John Jaggard held the right of publishing Bacon's *Essays* from their author. His shop was quite close to Bacon's house, his old master's son was a steward of Bacon, and in 1618, as we shall see, Bacon interested himself in a petition which John Jaggard presented partly on the behalf of the poor stationers of London and partly on behalf of himself.¹⁰³

The rare extremely rare 1606 Jaggard edition of Bacon's *Essays* is a paginary reprint of the 1598 Hooper edition published without the name of any printer on its title page. In keeping with the 1604/5 edition of *The Tragedy of Hamlet, Prince of Denmark* (or *The Tragedy of Francis Bacon, Prince of Wales*) printed by James Roberts who was sharing the same premises with William Jaggard, bearing a woodcut with the Tudor arms in its centre, similarly, on the title page of the 1606 Jaggard edition of Bacon's *Essays* is printed a woodcut with two cupids with the Tudor arms in its centre.¹⁰⁴

The whole title page of the 1606 edition of Bacon's *Essays* printed for John Jaggard contains a total of 29 words and 4 digits in the date: $29+4=33$ Bacon in simple cipher. For the purposes of its encipherment the title page is divided into two halves-above and below the woodcut. On the top half there are 11 words containing 73 letters and in the bottom half 18 words containing 86 letters. The 18 words added to the 86 letters provides a total of 104 which minus the 4 digits in the date $104-4=100$ Francis Bacon in simpler cipher. The 86 letters added to the addition of the date $(1+6+0+6)$ plus the printer's device: $86+13+1=100$ again Francis Bacon in simple cipher. The 18 words added to the 86 letters: $18+86=104$ minus the woodcut $104-1=103$ Shakespeare in simple cipher. The whole page contains a total of 159 letters which minus I emblem and 1 woodcut $159-1-1=157$ Fra Rosicrosse in simple cipher.

Six years later John Jaggard published his 1612 edition of Bacon's *Essays* again printed with a woodcut with two cupids with Tudor arms in its centre on its title page,¹⁰⁵ from his business address in Fleet Street within walking distance from Bacon's living quarters at Gray's Inn. The title page of the 1612 edition is essentially a reprint of the 1606 edition the only substantial difference being the date and it thus carries much the same Baconian-Shakespearean ciphers.

The first of three editions of Bacon's *Essays* appeared in 1613 the first of which was printed for John Jaggard by his brother William Jaggard. On the top of the dedication page appears a woodcut with at its centre a Tudor rose above which sits a crown.¹⁰⁶ On the whole title page there are a total of 39 words F. Bacon in simple cipher. For the purposes of encipherment its title age is divided into three parts. The upper part contains 11 words comprising of 55 letters: $11+55=66$ a double cipher 33/33 Bacon in simple cipher. In the middle section there are 69 letters minus the 2 printer's marks: $69-2=67$ Francis in simple cipher and the 22 italic letters plus the 11 words equal 33 Bacon in simple cipher. The bottom section has 17 words containing 80 letters plus four digits in the date giving a total of 101 that minus the single woodcut $101-1=100$ Francis Bacon in simple cipher. The total of 101 added to the two printer's marks 'q' $101+2=103$ Shakespeare in simple cipher. There are 204 letters on the whole page minus the woodblock $204-1=203$ a split cipher for Francis Bacon (100)/Shakespeare (103) The whole page in total comprises of 39 words, 204 letters, the addition of the date $(1+6+1+3)$ 12, 2 printer's marks and 1 woodcut: $39+204+11+2+1=257$ a double cipher for Francis Bacon (100)/Fra Rosicrosse (157).

During the second decade of the Jacobean reign John Jaggard was in regular contact with Bacon who no doubt took a close interest in the nature of the printing of his *Essays* and most probably Bacon and Jaggard had several private conversations about them at either his place of business or Bacon's quarters at Gray's Inn and official residence at



1 Effaies. 7

2 Religious Me- 11
ditations. 9

3 Places of perswasion 18
2 and diffwasion. 13

$\frac{3}{11}$ Seene and allowed. $\frac{15}{73}$



6 Printed at London for Iohn Iaggard, 29
6 dwelling in Fleete streete at the 28
4 hand and Starre neere 18
 $\frac{2}{18}$ Temple barre. $\frac{11}{86}$
Date 4 1606. 13 date

Fig. 21 The deciphered title page of Bacon's 1606 edition of his *Essays*

Words

Letters

1

3

1

7

3

11

3

14

$\frac{3}{11}$

14
 $\frac{6}{55}$

3

16 RL
7 IL

3
2

18 RL

13 RL

$\frac{3}{11}$

15 IL
69

6

6

25
30

4

20

$\frac{1}{17}$

$\frac{5}{80}$

Date 4

date 11

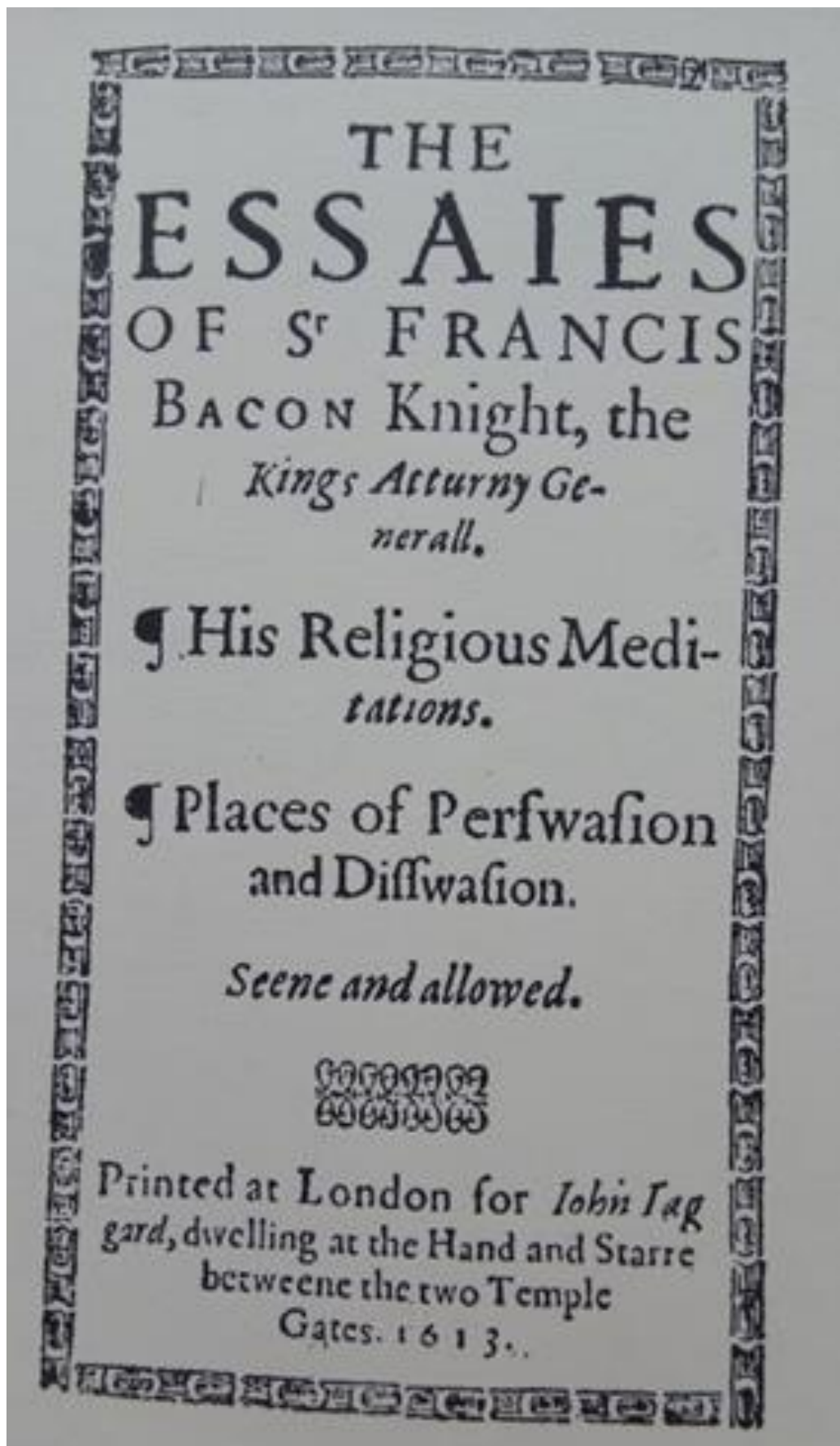


Fig. 22 The deciphered title page of Bacon's 1613 edition of his *Essays*

York House. In 1618 Jaggard also petitioned Lord Chancellor Bacon and Chief Justice Sir Henry Montague regarding a dispute on behalf of the poor stationers of London:

In 1618 evidently, he [John Jaggard] assumed the leadership of the poorer stationers against the Master, Wardens and Assistants of the Company, whom he accused of giving privileges to the English stock-part of the group of copyrights which had reverted to the Company-to strangers and men of other companies instead of to the poor of their own Company to whom it belonged. John Jaggard petitioned the Chief Justice, Sir Henry Montague, and the Lord Chancellor, Francis Bacon, asking for their intervention in this matter. John Jaggard's petition was successful. On the 10th of May 1618 both Montague and Bacon endorsed the petition ordering the officials of the Company to obey their own regulations, and five days later Bacon wrote from York House to reinforce his endorsement.¹⁰⁷

As well as not once mentioning the critically important relationship between Bacon and the Jaggards in *The Shakespeare Ciphers Examined*, the fraudulent Friedmans also did not discuss the key relationship between Bacon and Ben Jonson, the editor of the Shakespeare First Folio.¹⁰⁸ Not that they were the only ones. The critical relationship between Bacon and Jonson has been ruthlessly suppressed by Bacon and Shakespeare editors and scholars for four hundred years and continues up to the present day. In his standard seven-volume edition of *The Letters and Life of Francis Bacon* his knowing editor and biographer James Spedding only briefly refers to Ben Jonson three times in passing.¹⁰⁹ In his indomitable manner (a method of delivery that Bacon himself would have been impressed with) Spedding hints at their secret relationship using a suitably theatrical metaphor 'Ben Jonson, who had seen something of him *off the stage* [my italics]; though we do not know how much....'¹¹⁰ and in another place which I quote in full 'Ben Jonson celebrated his birthday in lines breathing of nothing but reverence and honour.'¹¹¹ In more recent times drawing on primary manuscript sources and most if not all the previously printed orthodox biographies on Bacon that had gone before them, professors Jardine and Stewart in their *Troubled Life of Francis Bacon* (1998) refer to Ben Jonson on two occasions-one of which is of no interest to us here.¹¹² The second of these I quote in full 'Bacon celebrated his sixtieth birthday with a lavish banquet at York House. The great poet and playwright Ben Jonson wrote an ode entitled 'Lord Bacon's Birthday',¹¹³ (reproduced below).

When the day of his sixtieth birthday on 22 January 1621 arrived it was celebrated with a lavish banquet at his official residence York House on the Strand with a large throng of the great and the good beating a path to his door. The guests would have included the great and the good from all walks of life. It would have included the nobility from the city and the country, as well as courtiers and gentlemen of the court. It was also very likely that his guest list included many members of his Rosicrucian-Freemasonry Brotherhood, among them the various past and future Grand Masters of England, Inigo Jones, the Earl of Arundel, and the current Grand Master of England William Herbert, Earl of Pembroke to whom Bacon just two years later dedicated his Shakespeare First Folio. In all times Bacon's official residence acted as a beacon for foreign ambassadors, diplomats and other dignitaries all of whom if in the kingdom at the time would have received invitations, especially his close and inward friend the resident Spanish Ambassador Count Gondomar, who lived close to the bookshop of William Jaggard, where the two of them must have spent many an afternoon. For a great writer like Bacon the key important printers and publishers of the Worshipful Stationers' Company would have attended his birthday celebrations, many of whom he had enjoyed long relationships going back years and even decades. Most probably

the brothers William and John Jaggard, the printers and publishers of Bacon's *Essays*, Isaac Jaggard printer with his father William Jaggard, of the Shakespeare First Folio, and other members of the First Folio syndicate John Smethwicke, William Aspley and Edward Blount. Then there were the poets and playwrights George Herbert and Ben Jonson who for his sixtieth birthday celebrations wrote the following coded verse for 'Lord Bacon's Birthday', in which he describes Bacon as his King, and about whom, he says, there is some kind of mystery surrounding him:

Hail, happy genius of this ancient pile!
 How comes it all things so about thee smile?
 The fire, the wine, the men! And in the midst,
 Thou stand'st as if some mystery thou didst!
 Pardon, I read it in thy face, the day
 For whose returns, and many, all these pray:
 And so do I. This is the sixtieth year
 Since Bacon, and thy lord was born, and here;
 Son to the grave wise Keeper of the Seal,
 Fame, and foundation of the English weal.
 What then his father was, that since is he,
 Now with a title more to the degree;
 England's high Chancellor: the destined heir
 In his soft cradle to his father's chair,
 Whose even thread the Fates spin round and full,
 Out of the choicest, and their whitest wool.
 'Tis a brave cause of joy, let it be known,
 For 'twere a narrow gladness, kept thine own
 Give me a deep-crowned bowl, that I may sing
 In raising him the wisdom of my king.¹¹⁴

Following Bacon's fall from grace a few months later in an astonishing letter written to his trusted inward friend the Spanish Ambassador Count Gondomar dated 6 June 1621 Bacon explicitly states that he was to devote himself to the instruction of the actors in reference to the planned for Shakespeare First Folio and the service of posterity:

Your Excellency's love towards me I have found ever warm and sincere alike in prosperity and adversity. For which I give you due thanks. But for myself, my age, my fortune, yea my Genius, to which I have hitherto done but scant justice, calls me now to retire from the stage of civil action and betake myself to letters, and to the instruction of the actors themselves, and the service of posterity.¹¹⁵

In the last five years of his recorded life Bacon wrote, revised, expanded, translated and published an enormous body of his writings and works in Latin and English. This was carried out in his literary workshop at Gorhambury with the help of his 'good pens', including the poet and dramatist Ben Jonson, who assisted Bacon in translating his essays, previously printed and published by William and John Jaggard, into Latin:

The *Latine* Translation of them [Bacon's *Essays*] were a Work performed by divers Hands; by those of Doctor *Hacket* (late Bishop of *Lichfield*) Mr. *Benjamin Johnson* (the learned and judicious Poet) and some others, whose Names I once heard from Dr. *Rawley*; but I cannot now recal them.¹¹⁶

With Ben Jonson now living at Gorhambury, Bacon was busy gathering together from various manuscripts and printed sources his Shakespeare plays for publication in what is known as the First Folio of the Shakespeare Works. Twenty plays had been previously published in quarto editions and another sixteen were to be published for the first time in the First Folio. Many of the twenty plays previously issued in quarto editions were variously revised, amended and expanded by Bacon with Jonson working alongside him busily preparing and writing some of the prefatory material prefixed to the First Folio.

The imprint of the First Folio claims the volume was ‘Printed by Isaac Jaggard, and Ed. Blount, 1623’,¹¹⁷ but Blount was only a publisher and the printing of the Folio was done entirely in printing shop of William Jaggard and his son Isaac. On the last page of the Shakespeare First Folio appears a second colophon ‘*Printed at the Charges of W. Jaggard, Ed. Blount, I. Smithweeke, and W. Aspley, 1623.*’¹¹⁸ Sometime before his crowing triumph saw the light of day William Jaggard died in obscurity in October or early November,¹¹⁹ the printer of the greatest Rosicrucian-Freemasonry publication in the world that Bacon dedicated to William, third Earl of Pembroke, the Grand Master of England, and his brother Philip, Earl of Montgomery:

WILLIAM Earl of *Pembroke* was chosen *Grand Master* [1618]; and being approved by the King, he appointed *Inigo Jones* his *Deputy Grand Master*.

...*Grand Master* PEMBROKE demitted, A. D. 1630.¹²⁰

The preliminary pages of the Shakespeare First Folio consist of a verse signed by Ben Jonson facing the Droeshout portrait. The same poet and dramatist living with Bacon at Gorhambury, and a member of his Rosicrucian Brotherhood, also provides another long commendatory poem ‘To the memory of my beloued, The Avthor Mr. William Shakespeare’, whom Ben has known for many years to be nothing more than a pseudonym, or literary mask, for his Rosicrucian Grand Master, Lord Bacon. The learned address ‘*To the great Variety of Readers*’, signed by John Heminge and Henry Condell (both probably semi-illiterate and who certainly did not possess the learning for it), was itself most likely written by Bacon alone, or jointly, with Jonson in a Folio replete with other Baconian-Rosicrucian secrets. In his long verse ‘To the memory of my beloued, The Avthor Mr. William Shakespeare’ Ben Jonson who knew that Bacon was the secret author of the Shakespeare plays wrote:

*Leaue thee alone, for the comparison
Of all, that insolent Greece, or haughtie Rome
sent forth, or did from their ashes come.*¹²¹

In his posthumously published writings Ben Jonson describes his Rosicrucian Master Bacon in the words he used for him in the Shakespeare First Folio:

He [Bacon], who hath fill’d up all numbers; and perform’d that in our tongue, which may be compar’d, or preferr’d, either to insolent *Greece*, or haughty *Rome*.¹²²

For the purpose of encipherment the familiar title page of the Baconian-Rosicrucian-Freemasonic Shakespeare First Folio is divided into two halves above and below the infamous Droeshout portrait. The top half of the title page has 14 words containing 90 letters: 90+14=104 minus 1 portrait: 104-1=103 Shakespeare in simple cipher. Below the portrait are 29 italic letters (‘*Martin Droeshout Sculpsit London*’), 6 block italic capitals (‘*LONDON*’) and 32 roman letters: 29+6+32=67 Francis in simple cipher and

Words
2

1

1
2

1

 $\frac{7}{14}$

Letters
9

12

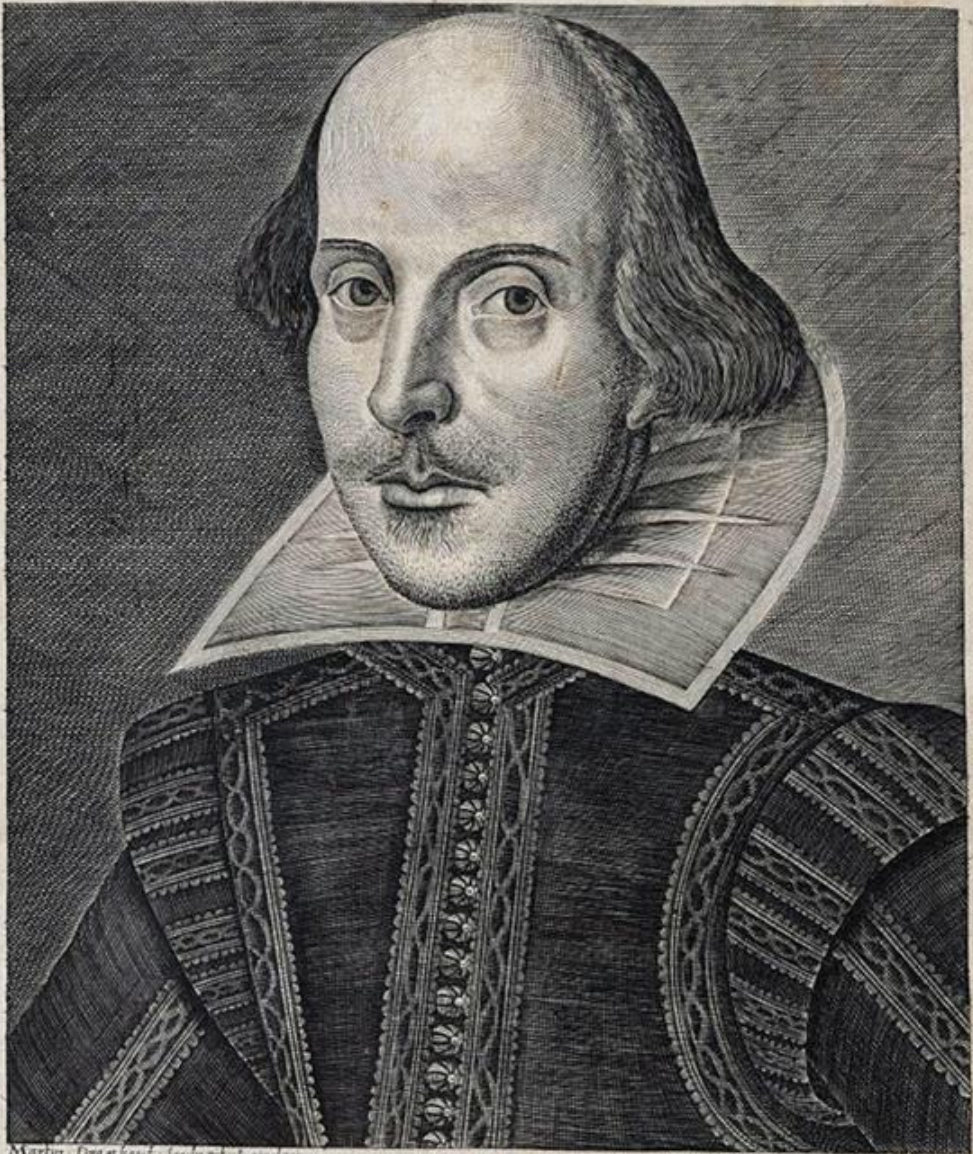
8
10

9

 $\frac{42}{90}$

MR. WILLIAM
SHAKESPEARES
COMEDIES,
HISTORIES, &
TRAGEDIES.

Published according to the True Originall Copies.



4

1
 $\frac{7}{26}$

L O N D O N
Printed by Ifaac Iaggard, and Ed. Blount. 1623.

29 IL
6 IL
 $\frac{32}{67}$ RL
12 date

Fig. 23 The deciphered title page of the Shakespeare First Folio (1623)

if the 29 italic letters are added to the 4 digits in the date: $29+4=33$ Bacon in simple cipher. When the 32 roman letters are added to the 1 portrait: $32+1=33$ it again gives us Bacon in simple cipher. The whole page contains a total of 26 words which plus the addition of the date ($1+6+2+3$) and the single Droeshout portrait: $26+12+1=39$ F. Bacon is simple cipher and moreover the whole page has a total of 157 letters Fra Rosicrosse in simple cipher the secret signature of Bacon's Rosicrucian Brotherhood.

Within days of the publication of his Shakespeare First Folio in November 1623 there appeared in Latin Bacon's truly monumental *De Augmentis Scientiarum Libri IX* that included several pages on his cipher systems including an expansive and detailed explanation of his Bacon-Shakespeare Bi-literal Cipher. His discussion on ciphers is deliberately formatted to commence on page 277: a double simple cipher for Francis Bacon (100)/William Shakespeare (177):¹²³

A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T	U	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Examples:	F R A N C I S	B A C O N
	6 17 1 13 3 9 18=67	2 1 3 14 13=33

W I L L I A M	S H A K E S P E A R E
21 9 11 11 9 1 12=74	18 8 1 10 5 18 15 5 1 17 5=103

FRANCIS BACON/WILLIAM SHAKESPEARE= 277

The third in an interconnected trinity of publications following the Shakespeare First Folio and *De Augmentis Scientiarum Libri IX* came not long after in the shape of the extremely rare work on cryptology, one still shrouded in secrecy and mystery, entitled *Cryptomenytices et Cryptographiae Libri IX* by Gustavus Selenus, a pseudonym for Augustus, Duke of Brunswick-Luneburg, a near five hundred page work published at Luneburg early in 1624.¹²⁴

In *The Shakespeare Ciphers Examined* the fraudulent Friedmans refer to this very important and seminal work on codes and ciphers twice in passing (See Notes) in another example of withholding and suppressing critical evidence and information that points to and confirms Bacon's authorship of the Shakespeare works.¹²⁵ Nor were they alone. In his monumental standard work *The Codebreakers The Story of Secret Writing*, the world authority on the history of codes and ciphers David Kahn, assigns a single paragraph to *Cryptomenytices et Cryptographiae* published in IX books just like Bacon's *De Augmentis Scientiarum Libri IX*.¹²⁶ Nothing in the paragraph-it does not mention Bacon-is any of interest for our current purposes, which is all the more curious on account that if the more diligent reader turns to the back of his 1181 page monograph, he writes 'See' Charles P. Bowditch, *The Connection of Francis Bacon with the First Folio of Shakespeare's Plays and with the Books on Cipher of his Time* (Cambridge University Press) 'pp. 13-15, for letters of Augustus suggesting that his likeness and that of Trithemius be in title-page engraving.'¹²⁷ Yet for some reason however Kahn decided not to draw to the attention of his readers in the text or in his Notes section all the evidence and information in this relatively difficult to obtain work pertaining to Bacon's links to the Shakespeare First Folio and *Cryptomenytices et Cryptographiae*.

tum esse. De illa igitur Cura est abijcienda. Quod verò ad *Accentus Verborum*, nil opus est de re tam pusillâ dicere; nisi fortè illud quis notatu dignum putet; quod *Accentus Verborum* exquisitè, *Accentus* autem *Sententiarum* neutiquàm in Observationem venit. At tamen illud ferè vniuerso Geni humano commune est, vt Vocem in fine Periodi submittant, in Interrogatione eleuent, & alia huiusmodi non pauca. Atque de *Grammatica Patte*, quæ ad *Locutionem* spectat, hætenus.

Quod ad *Scriptionem* attinet, ea aut *Alphabeto Vulgari* perficitur, (quod vbique recipitur,) aut *Occulto & Priuato*, de quo inter singulos conuenit, quod *Ciphras* vocant. At *Orthographia vulgaris* etiàm Controuersiam & Quæstionem nobis peperit; Vtrum scilicet eodem, Verba scribere oporteat, quo pronunciantur, modo; an potius ex more consuetudo? At illa *Scriptio* quæ reformatâ videri possit, (vt scilicet *Scriptio Pronunciationi* consona sit) est ex Genere inutilium Subulicatum. Nam & ipsa *Pronunciatio* quotidie gliscit, nec constans est; & Deriuationes Verborum, præsertim ex Linguis extraneis, prorsus obscurantur; Denique cum ex more recepto Scripta, morem pronuntiandi nullo modo impediant, sed liberam relinquant, quorsùm attinet ista Nouatio?

Ad *Ciphras* igitur veniendum. Earum Genera haud pauca sunt. *Ciphræ simplices*; *Ciphræ Non significantibus Characteribus intermixte*; *Ciphræ duplices Literarum uno Characterẽ complexæ*; *Ciphræ Rotæ*; *Ciphræ Clauis*; *Ciphræ verborum*; alia. Virtutes autem in *Ciphris* requirendæ tres sunt: Vt sint Expeditæ, non nimis operosæ ad scribendum: Vt sint fidæ, & nullo modo pateant ad Deciphrandum; Addo denique, vt, si fieri possit, suspicione vacent. Si enim Epistolæ in Manus Eorum deuenient, qui in eos qui scribunt,

Fig. 24 Page 277 of *De Augmentis Scientiarum Libri IX*

In the middle of the twentieth century Professor Pierre Henrion discovered a unique copy held at the *Bibliothèque Nationale* in Paris of a portrait of Augustus, Duke of Brunswick that served as a frontispiece to a rare German edition of *Cryptomenytices et Cryptographiae*. Underneath the portrait is the Latin word ‘EXPENDE’, i.e., weigh and consider, or observe carefully. When carefully observed Professor Henrion points out a series of differences of the features in the two halves of the portrait. There are three vertical braids to the Duke of Brunswick’s left side and only two on the right side with one half of the chest wider and more powerful looking than the other. There are also a number of anomalies in the face. The ocular sacs of each eye do not look like they belong to the same person, there are differences in the size of the pupils, and the one eye is clearly much larger than the other. At the top of the oval there appears an asterisk which if a white line is drawn at a slight angle between the two halves of the features, it clearly shows we are looking at two completely different men. What we have is a composite portrait, the one on the left with a coat sleeve reversed after the manner of the Droeshout portrait in the Shakespeare First Folio depicting Bacon and on the right the Duke of Brunswick united in their purpose of the secret production of the *Cryptomenytices et Cryptographiae*,¹²⁸ pointing for Professor Henrion, to Bacon as its true author. The whole portrait is a complex cryptogram:

If you want one more hint that the man here concerned is Bacon count the *black* interspaces between the little white V-shaped designs of the two braids to the left of the row of buttons. (To be counted as one, an interspace must be limited by *two* whites). You notice that the exterior braid counts 33 which is *Bacon* in “simple cipher.” The total of the two braids is 67 which is *Francis* [in simple cipher]. The total of the three braids to the right of the buttons is 100, which is *Francis Bacon* [in simple cipher].¹²⁹

If points out Professor Henrion you count the capital letters in the quatrain below the portrait ‘PIETATIS ALVMNVS, PRINCEPS BRVNSVVIGI’ (counting the w as two v’s) it also provides a total of 33 Bacon in simple cipher as well as pointing to other hidden cipher counts around the quatrain.¹³⁰

The revealing title page of the rare 1624 edition *Cryptomenytices et Cryptographiae* deliberately suppressed by the fraudulent Friedmans in *The Shakespeare Ciphers Examined* confirms Bacon’s direct involvement in the production of it and his secret authorship of the Shakespeare works. The title page contains a pictorial cryptogram through four pictures that surround the central square of bibliographical information pertaining to its title and author and date of publication. The work was translated into English in three typewritten volumes by Dr J. W. H. Walden, a copy of which is held in the Fabyan Collection at the Library of Congress, Washington.¹³¹ It was translated by Dr Walden of Harvard University for Colonel Fabyan at whose estate at Riverbank the Friedmans worked on the Baconian ciphers both of whom were of course familiar with the work which they glossed over and withheld vital critical information from their duped and deceived readers in *The Shakespeare Ciphers Examined*. Keen to discover all that could be known about *Cryptomenytices et Cryptographiae* Fabyan requested that Dr Walden travel to Wolfenbuttel, the long-time residence of the Duke of Brunswick where his library still exists, containing a vast collection of manuscripts and several volumes of his letters.¹³² Information pertaining to the engraved pictures was found in several letters sent in May 1620 by the Duke of Augustus to his literary agent Philip Hainhofer of Augsburg relating to *Cryptomenytices* and the engraving on its title page.



Fig. 25 The unique frontispiece of an edition of *Cryptomenytices et Cryptographiae* being a composite portrait of Bacon and the Duke of Brunswick

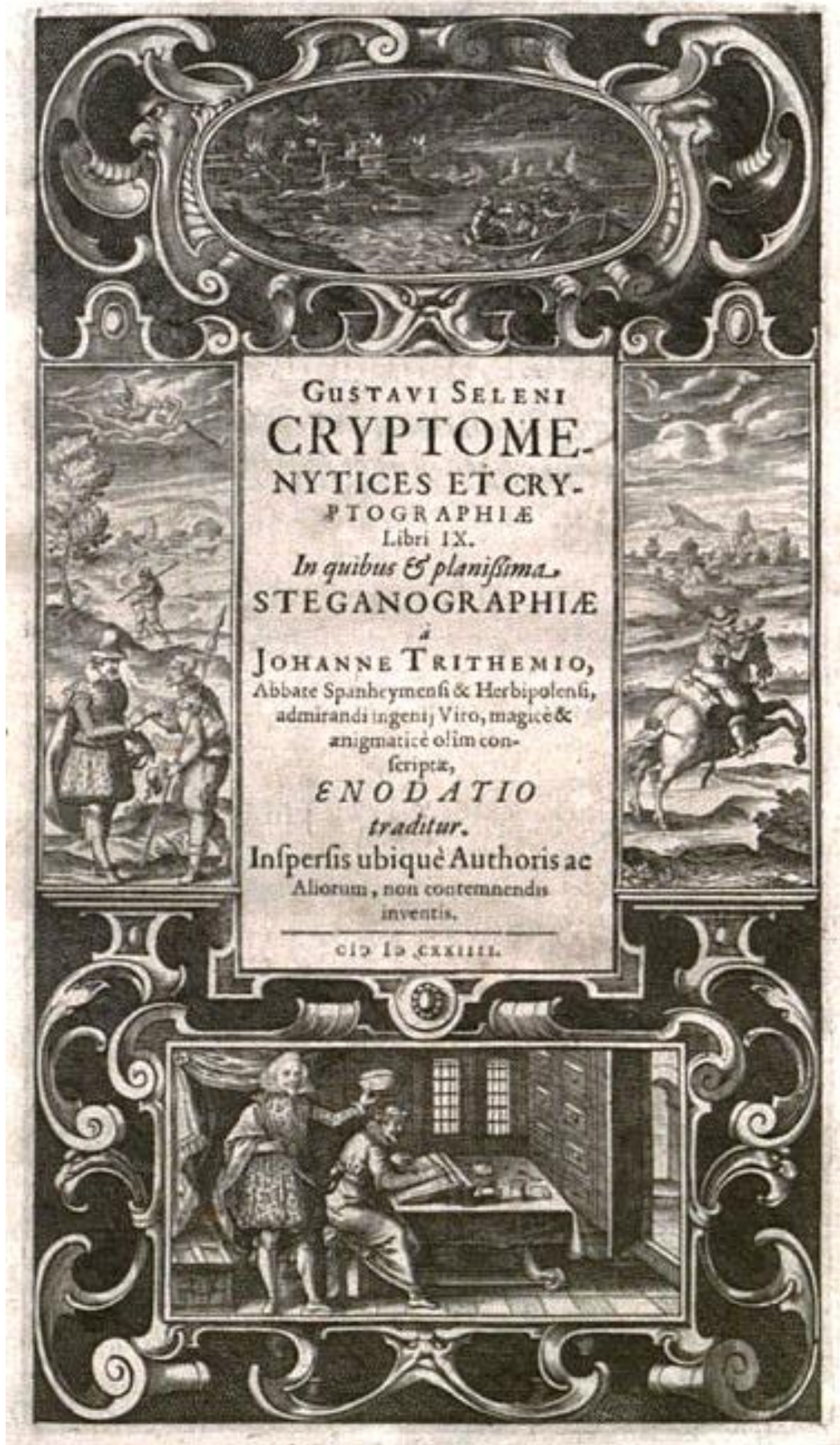


Fig. 26 The title page of Gustavus Selenus's *Cryptomenytices et Cryptographiae Libri IX* (1624)

In a letter dated 27 May 1620 the Duke of Brunswick writes to his literary agent Hainhofer requesting that one of the plates on the frontispiece was to be of Trithemius taken from *Trithemius sui ipsius vindex* (1616) edited by Father Sigismond showing him 'sitting at a table writing, with someone standing behind him and holding his cap or mitre raised a little from his head'.¹³³ In some of the other pictures on the title page 'the post might be represented here and there, on foot, on horse, on land and water, as letters are despatched hither and thither: and also what is appropriate for the sending of secret letters.'¹³⁴ Furthermore 'he who takes the mitre from the abbot and uncovers his head might perhaps be made to resemble Gustavus Selenus'.¹³⁵ In a letter dated 8 July 1620, replying to one sent by Hainhofer six days earlier, the Duke of Brunswick says he has 'looked through the frontispiece, which I herewith return together with 13 designs, the remainder of the previous 22. These may be carefully finished after this pattern; as far as practicable also doves and arrow of the sort suggested: and some four or five flags and four or five torches be held or shown from a fortress'; adding, 'In sending the pieces, I should like two copies of each, in order to send one of them, when necessary, back again corrected, so that the workman may have an accurate and exact copy to finish from.'¹³⁶ In commenting on these letters Bowditch who subjected the title page and the contents of *Cryptomenytices et Cryptographiae* to a very careful scrutiny correctly states that 'it is very clear that the instructions of the Duke were not literally carried out by Hainhofer' or at least not all of them, who himself may or may not have been privy to the secret message concealed in its title page. It is clear from the portrait of Trithemius found in the *Trithemius sui ipsius vindex* that it bears little or no resemblance to the sitting figure on the title page 'while a comparison with the face of Lord Bacon (as shown on two of the frontispieces of his work) reveals a very decided likeness',¹³⁷ whom it is designed to represent.

Let us now take a very close look at the revealing pictorial cryptogram (an image or text written in code or cipher) depicted on the title page of *Cryptomenytices* and see what it tell us that the Friedmans dishonestly suppressed in *The Shakespeare Ciphers Examined*.

The lower picture on the title page is the one that depicts the Duke of Brunswick standing behind a figure who is supposed to be Abbot Trithemius. To emphasize that the figure is not in reality Trithemius the Duke of Brunswick is shown removing the mitre from his head which is not tonsured (a part of a monk's or priest's head left bare on top by shaving off the hair) that would be the case of a fifteenth century Abbot. In fact if we look very carefully at the figure he is presented as a philosopher resembling Bacon, who is also wearing the ruff and below his right arm the sleeve of a courtier, a role he played all his life at the Elizabethan and Jacobean courts. He is depicted seated at a desk, writing assiduously on a large Folio sheet representing the First Folio of the Shakespeare works, behind him a curtain-perhaps a theatrical curtain-is raised, which if allowed to fall would again conceal his identity from us. The philosopher Bacon the concealed author of the Shakespeare works is writing in a secret room with barred windows hidden from the outside world behind who stands the Duke of Brunswick, a member of his Rosicrucian Brotherhood, sworn to protect the secrecy that surrounds his life and writings.

The identity of Bacon was further confirmed by the Dr Speckman, a professor of mathematics and expert on cipher methods, who pointed out that using the twenty-two letter Latin alphabet cipher transportation cipher system used by Trithemius, when the letters MITRE are removed from the name TRITHEMIUS it leaves TSUIH, which when transported five places to the right, yields an anagram of BACON.¹³⁸



Fig 27 The title page of Gustavus Selenus's *Cryptomenytices et Cryptographiae Libri IX* (1624) top & bottom panels



Fig 28 The title page of Gustavus Selenus's *Cryptomenytices et Cryptographiae Libri IX* (1624) side panels

Following the Duke of Brunswick's instructions the other panels of the enigmatic title page depict the various ways of despatching a written document, be it a letter or a quarto sheet, to a man holding a spear dressed in actor's boots, representing the actor William Shakspeare, from the same man representing Bacon in the lower panel. In the middle distance the spearman Shakspeare still holding his spear on his back, is shown carrying what we can assume to be quartos or books of plays given to him by Bacon.¹³⁹ In the sky we see an arrow heading toward a bird with what looks like a scroll in its mouth. But is it a real bird asks Durning-Lawrence 'No, it has no real claws, its feet are Jove's lightnings',¹⁴⁰ an allusion to the last line in the Rosicrucian manifesto *Fama Fraternitatis* 'Sub Umbra Alarum Tuarum Jehova' ('Under the Shadow of Jehova's Wings').¹⁴¹

In her recent *The Rosicrucian Enlightenment* Dr Frances Yates has an interesting chapter entitled 'Francis Bacon 'Under The Shadow Of Jehova's Wings' wherein she reproduces the frontispiece of Thomas Sprat's first official history of the Rosicrucian Royal Society in which Bacon is sitting under the wing of a trumpeting angel, an allusion to 'under the shadow of Jehova's wings', recalling the *Fama Fraternitatis*, a trumpet call to Europe, broadcasting their divine intent of a Universal Reformation of the Whole World.¹⁴² Their second Rosicrucian manifesto the *Confessio Fraternitatis* (*The Confession of the Laudable Fraternity of the most Honourable Order of the Rosy Cross written to all the learned of Europe*) published anonymously (written by Bacon) at Cassel in Germany in 1615, contains a piece of devastating information not ever mentioned by Stratfordian authorities, orthodox Shakespeare biographers, editors or commentators. Its anonymous author Bacon points out how easily the so-called learned or learned fools, and the rest of the credulous world, are easily deceived with enigmas and illusions. One of them being of his own creation, which has misled and beguiled the sleepy universities and academia around the globe for centuries, all the way down to the present day:

For conclusion of our Confession we must earnestly admonish you, that you cast away, if not all, yet most of the worthless books of pseudo chymists, to whom it is a jest to apply the Most Holy Trinity to vain things, or to deceive men with monstrous symbols and enigmas, or to profit by the curiosity of the credulous; *our age doth produce many such, one of the greatest being a stage-player, a man with sufficient ingenuity for imposition*; [my italics] such doth the enemy of human welfare mingle among the good seed, thereby to make the truth more difficult to be believed, which in herself is simple and naked, while falshood is proud, haughty, and coloured with a lustre of seeming godly and humane wisdom.¹⁴³

OUR AGE DOTH PRODUCE MANY SUCH, ONE OF THE GREATEST BEING A
STAGE-PLAYER, A MAN WITH SUFFICIENT INGENUITY FOR IMPOSTION

The following year 1616, the year in which Bacon's literary mask William Shakspeare died, there was published at Amsterdam an extremely rare work with the inscription on its title page 'Cornelii Giselberti Plempii Amsterodamun Monogrammaon'. The enigmatic work contains fifty illustrations with Latin verses beneath them. Emblem 1 sees Fortune standing upon a globe (an allusion to the Globe Theatre) with one hand pushing from the pinnacle of Fame a man dressed as an actor with a feather in his hat; and the other, raising up a man wearing the familiar Bacon hat (in nearly all portraits he is presented wearing the hat of the Grand Master of the Rosicrucian-Freemasonry Brotherhood), whose face is hidden. Confirmation that it is Bacon comes in the initial letters from the ninth line in the verse '*Obscaenumque nimis crepuit, Fortuna Batavis Appellanda*', an anagram which yields F. Bacon.¹⁴⁴

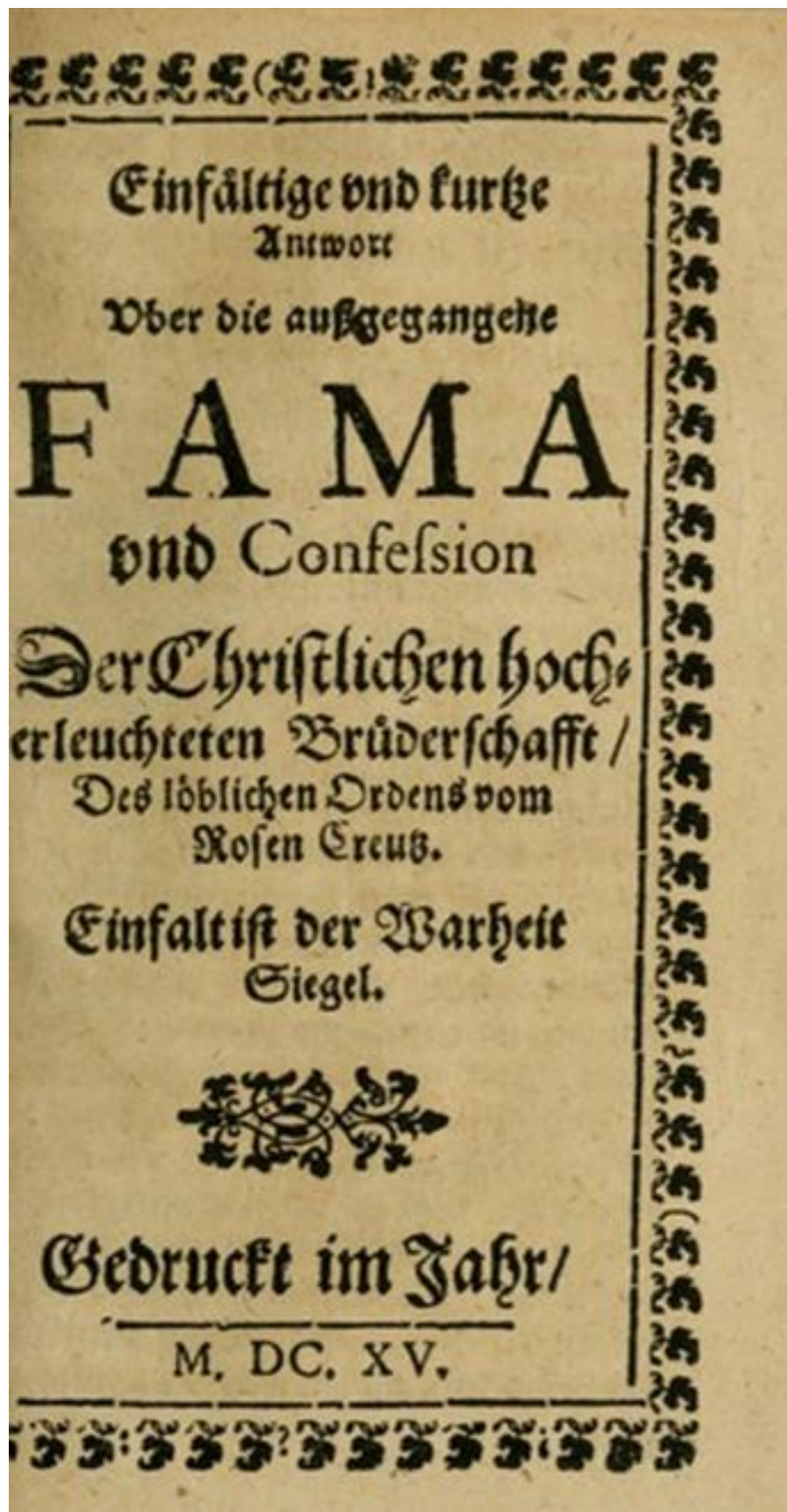


Fig. 29 The title page of the Rosicrucian manifestos the *Fama Fraternitatis* and *Confessio Fraternitatis* (1615)

C. PLEMPII.
EMBLEMATA.
 EMBL. I.



Fig. V.

*En Fortuna : manu quos rupem ducit in altam,
 Precipites abigit : carnificina Dea est.
 Firma globo imponi voluerunt sata caducam,
 Ipsa quoque ut posset risus, & esse iocus.
 Olim unctos Saliij qui præsilière per utres,
 Ridebant caderet si qua puella malè.
 O quàm sepe sales, plausumque merente ruinâ,
 Erubuit vitium fors inhonest a suum !
 Obscœnumque nimis crepuit, Fortuna Batavis
 Appellanda ; sono, quo sua curta vocant.
 Quoque sono veteres olim sua furt a Latini :
 Vt nec, Homere, mali nomen odoris ames.*

22

Fig. 30 The Plempii emblem with Fortune on a Globe raising up Bacon and pushing down the actor William Shakspeare

On turning the title page of the *Cryptomenytices* upside down, Charles P. Bowditch identified on the scroll in the mouth of the bird the old German words ‘Jus and Krus’ which in Latin would read ‘Just et crux’. This is a contraction of a motto taken from Columella ‘Summum just antiqui summam putabant crucem’. A very similar phrase ‘summum jus summa injuria’ from Cicero (*De Officiis*, I, 10) appears twice in Bacon’s *Promus of Formularies and Elegances* (private note-book) in which he jotted down in Latin, French, Italian and English-proverbs, aphorisms, turns of speech, phrases and words, which he later used in his acknowledged writings and his Shakespeare poems and plays.¹⁴⁵ In *The Promus of Formularies and Elegances (Being Private Notes, circ. 1594, hitherto unpublished)* by Francis Bacon Illustrated and Elucidated by Passages From Shakespeare C. M. Pott cites a number of examples from the Shakespeare plays (*King John*, *Measure for Measure*, *A Winter’s Tale*) where reference appears to have been made to this motto similarly used on the title page of the *Cryptomenytices*.¹⁴⁶

Let us now return to the Baconian-Shakespearean title page of the *Cryptomenytices*. As we are looking at it in the right hand picture we again see the actor Shakspeare who is now wearing the hat on his head with a sprig in it riding on horseback and blowing his horn on his way to the city and the theatres in the distance, spreading the word of the Shakespeare poems and plays, secretly written by Bacon.

The top panel which frames and contextualises the whole of the title page is shown at night with its associated theme of secrecy and hidden identity in which the town, the harbour and boat, with its crew of Rosicrucian Brothers, are half-lit by four beacons, which reminds us of a passage in Bacon’s essay *Of Simulation and Dissimulation*:

For if a man have that penetration of judgment as he can discern what things are to be laid open, and what to be secreted, and what to be shewed at half-lights, and to whom and when (which indeed are arts of state and life).¹⁴⁷

As well as a passage from his *Advancement of Learning*:

Another diversity of Method there is, which hath some affinity with the former, used in some case by the discretion of the ancients...that is Enigmatical and Disclosed. The pretence whereof is to remove the vulgar capacities from being admitted to the secrets of knowledges, and to reserve them to selected auditors, or wits of such sharpness as can pierce the veil.¹⁴⁸

In the sixteenth century and later Beacon was pronounced Bacon and Beacon contains an anagram of Bacon’s name. The panel pictorially concealing and revealing Bacon is surrounded by the three masks (to the right, left and below) of Tragedy, Comedy and Farce,¹⁴⁹ subliminally conveying the secret message, repeatedly reinforced in the rest of the title page, that Bacon is Shakespeare.

He is a second Trithemius (father of modern cryptology) and responsible for both its authorship and production in conjunction with his fellow Rosicrucian Brother, the Duke of Brunswick (Gustavus Selenus), its editor and publisher, with now all its clear inextricable links to his Shakespeare First Folio. The work also usefully produced an illustration of Bacon’s Simple Cipher which Bacon used in both the Shakespeare First Folio and the *De Augmentis Scientiarum*.¹⁵⁰

Several experts including the cryptographer Charles Bowditch; the Dutch Professor of mathematics and sixteenth and seventeenth cipher expert Dr Speckman; Professor Pierre Henrion of Versailles University and member of the French Cipher Service in the Second World War, the Baconian code and cipher expert Thomas Bokenham, and Peter Dawkins, Founder-Director of the Francis Bacon Research Trust, a recognised expert on Bacon, Shakespeare and the Rosicrucians, as well as renowned authority on

CAPUT VI.

De Comparatione Arbitrariâ mediante
Clave: Item Fortuitâ mediante
Instrumento.

Ecundus Principalis Modus pendet à Clave. Ad cuius normam hinc Literæ spargendæ: Quæ & ipsa Litera est, (vid. f. c. 8. Lib. 2.) suoquæ ordine, quo stat in Alphabeto docet, quoto loco altera Litera collocanda sit: E.g. Stante Alphabeto:

*1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24.
a b c d e f g h i k l m n o p q r s t u v w x y z*

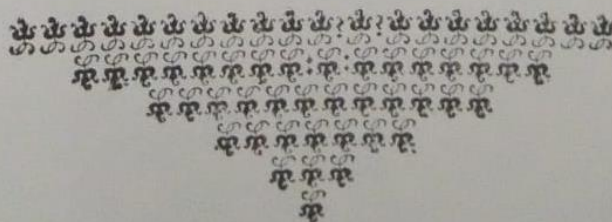
Si Secretum sit Fuge ocyùs: ponatur Litera F, quæ quoniam sexta in ordine est Alphabeti, hinc sequens Litera U, post eam sexto loco sistenda: Et cum U 20. sit in Alphabeto, hinc vigesimo loco post Literam U collocanda Litera G. Undè si ad eum modum pergis, ex Secreto talis exsurgere potest Oratio.

Faustiùs tibi, mihi certè nihil gratius est tuo reditu, quem spe cityùs accelerasti. Nî enim istud factum fuisset, ingens rebus tuis damnum, &c.

Notandum hinc, si numerus Literæ duplicetur, laxiorem dari hinc facultatem conficiendi orationem.

Tertius Modus pendet à decantato illo instrumento bractæ perforatæ, ubi ratione foraminis vel lati vel angusti, scribuntur una vel plures Secreti Literæ, atquæ ejusdem beneficio, Lectori vicissim deteguntur. Cujus Instrumenti confectiorem, & per illud Scribendi Modum ex Cardano & Glauburgio, in Expõsitione ad Polygraph. Trithemij, Porta, Lib. 2. c. 18. luculenter aperuit: Ideoque nihil ultra addimus. Vide

sup. Lib. 2. c. 9. & inf. Lib. 6. c. 10. & 20. Nam Instrumenta ibi descripta, hinc non ineptè quadrant.



CAPUT

Fig. 31 An illustration of Bacon's Simple Cipher from the *Cryptomenytices et Cryptographiae*

all aspects of Baconian cryptology; have identified and confirmed numerous ciphers relating to Bacon and his Shakespeare plays in *Cryptomenytices et Cryptographiae*.¹⁵¹ Leaving no doubt whatsoever that Bacon, an expert on all matters of cryptology, was directly involved in the writing and production of a near five hundred page work on ciphers, which was a compendium of all the major cryptographic works that had gone before, including those by Trithemius, Porta and Vigenère as well as countless others.

The Shakespeare First Folio and *De Augmentis Scientiarum* which produced for the first time a detailed explanation of his bi-literal cipher (later discovered by Elizabeth Wells Gallup to have been inserted by Bacon in the Folio) and the *Cryptomenytices et Cryptographiae* published shortly, all derive from the same source. This was all again wonderfully encapsulated in the little known title page of Bacon's later edition of the *De Augmentis* published in Holland in 1645. In this title page the figure representing Bacon on the title page of the *Cryptomenytices et Cryptographiae* is here again seated in front of a large Folio (his Shakespeare First Folio) with his left hand controlling his literary mask William Shakspeare clad in an actor's goat-skin, holding a clasped book, like the old Masonic Rituals, symbolising his Rosicrucian-Freemasonry Brotherhood closely guard and watch over Bacon's secret life and writings including his concealed authorship of the Shakespeare works.¹⁵²

The extensive evidence and information given above nearly all of which is not found in *The Shakespeare Ciphers Examined* by the fraudulent Friedmans undoubtedly completely invalidates and demolishes it, but they were just mere pawns in a much deeper, wider and more complex illusion, which has deceived and beguiled the rest of the world for the last four hundred and fifty years.



Fig. 32 The 1645 title page of *De Augmentis Scientiarum* showing Bacon with his hand controlling his literary mask William Shakespeare.

**Elizabeth Wells Gallup and the Riverbank Cipher Department where the
Friedmans anonymously wrote detailed tracts endorsing Gallup and her method
of decipherment and the presence of the Bacon Bi-literal Cipher in the
Shakespeare Works, and repeatedly lied to the world about it for the rest of
their lives**

The Riverbank estate located along the Fox River west of Chicago is still shrouded in secrecy and mystery germane to the Bacon Bi-literal Cipher and its presence in the Shakespeare works. It was purchased by the visionary businessman George Fabyan and his wife Nelle in 1905 which over the following years and decades they expanded into a vast self-sufficient estate stretching to around six hundred acres.

The enigmatic Fabyan came from a distinguished and wealthy Boston family. His father had headed the Bliss Fabyan Corporation then the world's largest cotton goods organisation and it was expected the son would work his way up in the firm and take over from his father. But George, an impetuous and headstrong youth ran away from home and began working as a salesman for the firm under an assumed name. With the kind of initiative and energy that would characterise all his later enterprises, the young Fabyan produced such remarkable sales figures that they attracted the attention of the head of the corporation, his estranged father. An emotional reconciliation soon followed and on the death of his father a few years later the prodigal son inherited three million dollars and control of the company's Chicago Office.

He used his wealth to build the large estate in Geneva Illinois where he established the internationally recognised Riverbank Laboratories. Although Fabyan had received little formal education he had an inquiring mind and possessed a wide and impressive range of literary and scientific interests. To his eternal credit Fabyan was determined to use his wealth to attract scientists, researchers and cryptologists to Riverbank for as he saw it the advancement of learning on behalf of the betterment of humankind. He said 'Some rich men go in for art collections, gay times on the Riviera or extravagant living. But they all get satiated. That's why I stick to scientific experiments, spending money to discover valuable things that universities can't afford. You never get sick of too much knowledge.'¹⁵³ All very much Baconian, whose vision for humankind was after his death, continued by his Rosicrucian Brotherhood in his and their pursuit of the Universal Reformation of the Whole World. Thus in his own fashion, Fabyan was following in the footsteps of his hero and inspiration, Bacon, Founding Father of the Modern World.

At the time Fabyan began to purchase land in Geneva, he was also serving Governor Richard Yates and working as a military diplomat for his personal friend President Theodore Roosevelt, a 33rd Degree Freemason, on the team which negotiated the Portsmouth Treaty, ending the Russo-Japanese war in 1905. President Roosevelt was a great reader of Shakespeare plays and his love of Bacon's writings inspired him to create the system of national parks in the United States of America.¹⁵⁴

His grand vision for Riverbank was most probably Fabyan's idiosyncratic idea or version of Bacon's *New Atlantis (or, Land of the Rosicrucians)* an island governed through their great college called Solomon's House by a secret order of philosopher-scientists that pursue all the arts and sciences for the future benefit of humankind. In their vast programmes for scientific research the invisible Rosicrucian Brothers, who governed Solomon's House, investigated the secrets of nature and the natural world. In their scientific facilities and laboratories they constructed high towers to carry out

experiments in astronomy and meteorology, deep caves to study mining, geology and metallurgy, and deep salt and fresh water lakes for the study of fish and other sea-life. They cultivated and developed orchards and gardens to carry out investigations into the science of soil, plants, and trees as well as parks and enclosures to observe the beasts and the birds. There were also zoos for the study of genetics and the breeding of animals. The scientists of Solomon's House also carried out extensive experiments in drink and food production in their brewing-houses, bake-houses, and kitchens. In the so-called 'perspective houses' their scientists also performed tests on optics, the study of colour and light, and in the development of telescopes and microscopes. In their 'sound-houses' they studied sound and acoustics and possessed a 'mathematical house' for computation and geometry. They also prepared various kinds of engines for their investigations into motion, force and energy, which included instruments of war, and remarkably, bearing in mind *New Atlantis* was written in the seventeenth century, for the designs and experiments of their embryonic submarines and aircraft. Perhaps, above all else, they had what Bacon described as 'Chambers of Health' for experiments with drugs for the medical cure of diseases and the preservation of health and the extensive prolonging of life.¹⁵⁵

During the next decade and beyond Colonel Fabyan and his wife Nelle developed Riverbank into a remarkable estate which attracted a group of thinkers and doers from around the world. Fabyan hired Charles McCauley, an Irishman, then working for the US Department of Agriculture to direct planning for the estate and its greenhouses; a native Czechoslovakian Louis Kostel to manage the south greenhouse and Susumu Kobayashi as his Japanese gardener. The Fabyans' private zoo housed a wide variety of animals and birds: a kangaroo, monkeys, foxes, coyotes, skunks, pheasants, dogs, and other small animals. The operations of its scientific and commercial farms were headed by the German Theodore Matthews who lived on the estate with his family. In charge of the dog breeding kennels was another Irishman Jim Kirkpatrick that raised Kerry blue terriers, West Highland Scotch Terriers and German shepherds. Riverbank also housed a series of large greenhouses and vegetable gardens overseen by Joseph Kuchera that provided food for the estate with the Norwegian Jack Wilhemson, 'Jack the sailor', responsible for managing the boathouse and the water supply for all its residents and guests. Its operational Dutch Windmill processed wheat and grain, and down in its cellar, there were ovens for baking bread to feed the estate, whose staff at its peak numbered anywhere between 125 and 175, all paid and supported by Fabyan.

The Fabyans called their own residence 'The Villa' which was originally a farmhouse remodelled by the renowned architect and designer Frank Lloyd Wright with its own staff, including a secretary, several cooks, a houseman, and a personal maid. It was surrounded by planted urns and floral beds in the striking celestial shapes of planets and ornaments created by the resident sculptor, the Italian Silvio Silvestri, giving it the appearance of an idyllic and heavenly environment of peace and tranquillity.

For the pleasure of its residents, Fabyan built a large Greco-Roman swimming pool and a double set of yellow clay tennis courts and for recreation and relaxation a truly fabulous Japanese garden. There was also a rock grotto, or sunken garden, built by Nick Zoda and his crew of Italian Genevans and across the road from the villa stood a large windmill which supplied its water and an adjacent pond. On the east side of the estate, Fabyan built a Bavarian beer garden during prohibition where everyone drank and socialised. The estate also boasted a complex of adjoining buildings the largest of which was known as the Grille, a large two-storey construction, which was the scene of frequent dances and parties, for the residents and members of the military stationed

at Riverbank, for the purpose of studying codes and ciphers under the joint heads of the Riverbank Cipher Department, William and Elizebeth Friedman.

Then there were the Riverbank Laboratories that employed a large dedicated group of scientists engaged in studying plant genetics, animal husbandry, acoustics, health and physical fitness, military innovations and tactics, and cryptology. The first of these buildings called Engledew Cottage served as the living quarters for guests and the scientists working in the laboratories where in the offices at the rear Elizabeth Wells Gallup and William and Elizebeth Friedman studied cryptography and worked on the Bacon Bi-literal Cipher used in the Shakespeare plays. The building known as The Lodge also provided housing for the numerous scientists and scholars with the south building housing the Sabine Sound Chamber.

For some, the six hundred acre Riverbank estate was a paradise on earth and attracted famous visitors from around the world. The Fabyans hosted visiting American and foreign dignitaries, leading scientists, among them, the great theoretical physicist Albert Einstein, professors and academics from the universities, journalists, leading figures from the arts, famous actresses, and prominent figures from the entertainment industry.¹⁵⁶ It was this Fabyan Eden that awaited the arrival of Elizabeth Wells Gallup decipherer of the Baconian Bi-literal Cipher in the Shakespeare works and William F. Friedman and his future wife Elizebeth S. Friedman, who went on to become the two most famous and celebrated cryptologists of all time.

After graduating from Hillsdale College in Michigan in 1915 with an English degree, Elizebeth Smith spent the next year working as a substitute principal at a high school in a small Indiana town. It was not to her liking, she was ambitious and wanted to be a somebody, and in the early June of 1916 she boarded a train for Chicago looking for a new job and a new life. Staying with friends on the south side of the city, Elizebeth started visiting agencies seeking some kind of position in literature or research. She soon learned that nothing like that was available and after a week with no money and somewhat disillusioned she had apparently decided to return home. But the invisible hand of fate was about to intervene and change her life forever:

After graduating from college I went to Chicago to seek a congenial way of earning my living. At that point I could hardly suspect that in a few months I would embark on a lifelong career as a code expert and wife of a man who was to become one of the world's greatest minds in that secretive field.¹⁵⁷

In her unpublished autobiographical manuscript, Elizebeth says one of the agencies sent her to the famous Newberry Library which owned a rare copy of the First Folio of the Shakespeare Works. When the librarian showed Elizebeth the Folio she was awestruck 'My first sight of an original 1623 Shakespeare folio gave me something of the feeling, I suppose, that an archaeologist has, when he suddenly realizes that he has discovered a tomb of a great pharaoh.'¹⁵⁸ The librarian then informed Elizebeth there was a position at the private Riverbank estate owned by a very wealthy businessman George Fabyan who believed that the Shakespeare First Folio contained secret cipher messages proving Francis Bacon was the true author of the Shakespeare poems and plays. He often visited the library to examine the Folio and had informed the librarian he was seeking to hire 'a young, personable, attractive college graduate who knew English literature', preferably with an interest in Shakespeare.¹⁵⁹ The librarian called his Chicago office to let him know that Elizebeth was at the library and before they knew it Colonel Fabyan was drawing up in his limousine driven by his chauffeur Bert

Williams. All of a sudden this very large bearded man whom Elizebeth described as having ‘a very dashing, imperious manner’ was, all six foot four of him, towering over her.¹⁶⁰ The imperious Fabian ‘wasted no time there but at once invited me to go with him overnight to his estate at Geneva’.¹⁶¹ From the Newberry Library his chauffer Bert Williams drove them to the Chicago North & Western railway station where they caught a train on their journey to his Riverbank estate. On the way there he told her that a woman residing at Riverbank, Elizabeth Wells Gallup ‘had discovered a cipher which proved Francis Bacon had written Shakespeare’.¹⁶² Following a thirty-five mile journey the train finally arrived at Geneva, Illinois where another limousine was waiting for them with a second chauffeur which drove them the short distance to Riverbank. As they turned off the highway they pulled up before a large house known as The Lodge:

This was where Mrs. Gallup and her sister, Miss Kate Wells, resided and where they had all of their accouterments [sic] to prove their certain claim that Francis Bacon was the author of the Shakespeare plays and sonnets. This lodge was staffed with servants and it was there that I was to spend the night in a guest room.¹⁶³

Her proposed position at Riverbank would require her to work with the cipher staff investigating the presence of Bacon’s Bi-literal Cipher in the Shakespeare works:

At the dinner table, after I had been very briefly introduced to Mrs. Gallup and her work, I met the young men who were pursuing occupations of some sort or another on the estate. They did not live in the Lodge but took their meals there. Mrs. Gallup presided at the head of the table. She was an elderly woman of extremely aristocratic appearance and her varied conversation was of travel and residences abroad; of her stays with various distinguished families, who believed in her cause and who had financed her over periods of years. But I could not help but deduce from this conversation and some following that Mrs. Gallup had dwelt only among those who agreed with her premise and that she had little personal contact with the viewpoint of those who did not believe in the non-Shakespeare authorship of Shakespeare.

Before I returned to the city the next day, I had had two or three hours of consultation with Mrs. Gallup and gathered some idea of what was facing me. She planned to obtain a certain number of intelligent young women who would be taught to master her cipher-proof of Bacon’s authorship of the plays. By proceeding over the same ground she had covered, they would prove that her decipherments were correct. Then after that, they would go on to reading other portions of the cipher from the plays and other works of the Elizabethan era. For Mrs. Gallup researches had led her into the claim that Bacon had authored many other distinguished works of the Elizabethan age in addition to those of Shakespeare.¹⁶⁴

Born in 1848 in Paris, New York Elizabeth Wells Gallup studied at Michigan State Normal College (now Eastern Michigan University), the world renowned Sorbonne in Paris and the University of Marburg. For twenty years she taught and became a high school principal in Michigan. Remarkably well educated with a highly intelligent and inquiring mind she possessed a remarkable knowledge of the Bacon and Shakespeare works and other Elizabethan and Jacobean literature. She and her sister Miss Kate Wells later developed a keen interest in Dr Orville Ward Owen and his word cipher and enthusiastically joined him in his investigations attempting to prove Bacon was the true author of the Shakespeare works. With her curiosity awakened and familiar with the statement made by Bacon in his *De Augmentis Scientiarum* on the use and application of the bi-literal-cipher the intrepid Mrs Gallup began to closely examine the different printing types used in the Shakespeare First Folio and other Elizabethan

works that she was convinced concealed secret messages proving Bacon's authorship of the Shakespeare works. Let us then proceed to take a look at the Bacon Bi-literal Cipher as explained by Bacon in his *De Augmentis Scientiarum*.

Shortly before the publication of the Shakespeare First Folio in November 1623 there appeared in Latin the monumental *De Augmentis Scientiarum Libri IX* (issued in October 1623) with several pages on Bacon's various cipher systems including an expansive and detailed explanation with examples of his famous Bacon-Shakespeare Bi-literal Cipher. The presentation on his cipher systems in *De Augmentis* began on page 277: simple cipher for Francis Bacon (100)/William Shakespeare (177).¹⁶⁵ It was first translated into English under the title *Of the Advancement and Proficiency of Learning or the Partitions of Sciences IX Bookes* in 1640 from which I reproduce the following passage from a page containing 36 full lines of printed text (the number of plays printed in the Shakespeare First Folio):

*Wherefore let us come to CYPHARS. Their kinds are many, as Cyphars simple; Cyphars intermixt with Nulloses, or non-significant Characters; Cyphers of double Letters under one Character; Wheele-Cyphars; Kay-Cyphars; Cyphars of words; Others. But the virtues of them whereby they are to be preferr'd are Three; That they be ready, and not laborious to write; That they be sure, and lie not open to Deciphering; And lastly, if it be possible, that they may be managed without suspition....As for the shifting off examination, there is ready prepared a new and profitable invention to this purpose; which, seeing it is easily procured, to what end should we report it, as Deficient. The invention is this: That you have two sorts of Alphabets, one of true Letters, the other of Non-significants; and that you likewise fould up two Letters; one which may carrie the secret, another such as is probable the Writer might send, yet without perill. Now if the Messenger be strictly examined concerning the Cypher, let him present the Alphabet of Non-significants for true Letters, but the Alphabet of true Letters for Non-significants: by this Art the examiner falling upon the exterior Letter, and finding it probable, shall suspect nothing of the interior Letter. But that jealousies may be taken away, we will annexe an other invention, which, in truth, we devised in our youth, when we were at Paris: and is a thing that yet seemeth to us not worthy to be lost. It containeth the highest degree of Cypher, which is to signifie omnia per omnia, yet so as the writing infolding, may beare a quintuple proportion to the writing infolded; no other condition or restriction whatsoever is required. It shall be performed thus: First let all the Letters of the Alphabet, by transposition, be resolved into two Letters onely, for the transposition of two Letters by five placeings will be sufficient for 32. Differences, much more for 24 which is the number of the Alphabet. The example of such an Alphabet is on this wise.*¹⁶⁶

In the following pages (see facsimiles) Bacon sets out the combinations of the 'A's and 'B's used in his 24 letter (I and J and the U and V were interchangeable) Bi-literal Alphabet. In this form of steganography (concealing a message within another message) the exterior text requires five letters for every letter required in the interior text. For Bacon to secretly insert his bi-literal cipher into a printed work it required two different typefaces either in roman or italic type one representing the A's and the other the B's. Unlike in the example showed by Bacon, to avoid unwanted suspicion to secretly insert his bi-literal cipher in a printed work, he needed to use two separate typefaces with only slight differences between them so the uninitiated ordinary reader would not suspect the presence of a secret cipher message. This would mean that any future decipherer would have to possess extraordinarily good eyesight (perhaps aided by a strong magnifying glass and other scientific equipment) and a trained eye to very closely observe the small and fine differences between the typefaces. Inserted over a large number of pseudonymous, anonymous and acknowledged works, including the

Shakespeare First Folio, it would require a Herculean effort of strength, determination and commitment over many, many, years or even decades, to decipher it. .

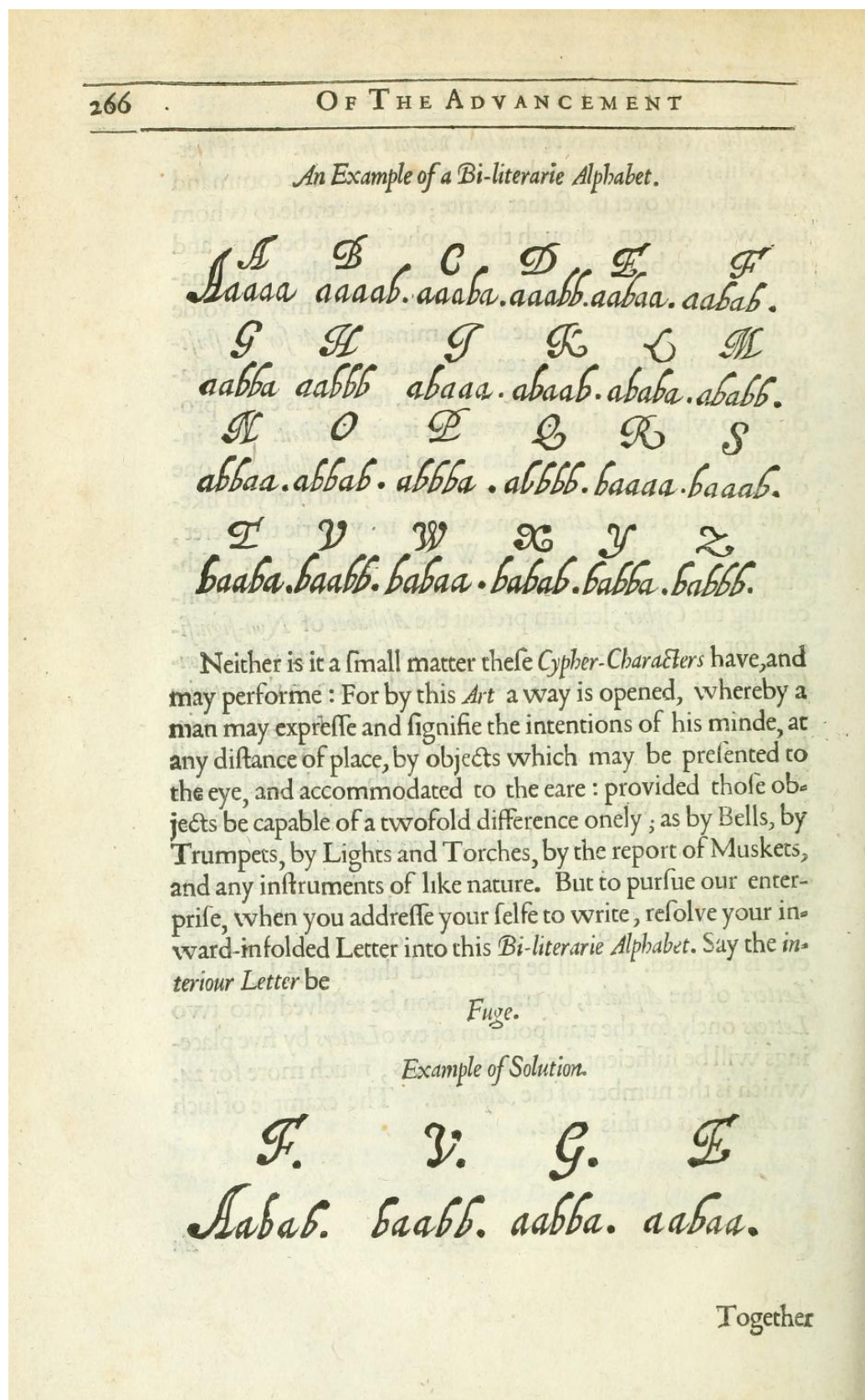


Fig. 33 The Bacon Bi-literal Cipher in the 1640 *Advancement of Learning*

Together with this, you must have ready at hand a *Bi-formed Alphabet*, which may represent all the *Letters* of the *Common Alphabet*, as well *Capitall Letters* as the *Smaller Characters* in a double forme, as may fit every mans occasion.

An Example of a Bi-formed Alphabet.

a. b. a. b. a. b. a. b. a. b. a. b. a. b.
 { A A a. a. B. B. b. b. C. C. c. c. D. D. d. d.
 a. b. a. b. a. b. a. b. a. b. a. b. a. b.
 { E. E. e. e. F. F. f. f. G. G. g. g. H. H. h. h.
 a. b. a. b. a. b. a. b. a. b. a. b. a. b.
 { I. I. i. i. K. K. k. k. L. L. l. l. M. M. m. m.
 a. b. a. b. a. b. a. b. a. b. a. b. a. b. a.
 { N. N. n. n. O. O. o. o. P. P. p. p. Q. Q. q. q. R.
 b. a. b. a. b. a. b. a. b. a. b. a. b. a. b.
 { R. R. r. r. S. S. s. s. T. T. t. t. V. V. v. v. u. u.
 a. b. a. b. a. b. a. b. a. b. a. b. a. b. a. b.
 { W. W. w. w. X. X. x. x. Y. Y. y. y. Z. Z. z. z.

L 12

Now

Fig. 34 The Bacon Bi-literal Cipher in the 1640 *Advancement of Learning*

Now to the interiour letter, which is Biliterate, you shall fit a biformed exterior letter, which shall answer the other, letter for letter, and afterwards set it downe. Let the exterior example be,

Manere te volo, donec venero.

An Example of Accommodation.

F V G F
a a b a b b a a b b a a b b a a b a a b a a.
Manere te volo donec venero

We have annex likewise a more ample example of the cypher of writing *omnia per omnia*: An interiour letter, which to expresse, we have made choice of a Spartan letter sent once in a *Scytale* or round cypher'd staffe.

Perditae Res. Mindarus cecidit. Milites
esuriunt. Neque hinc nos extricare, neque
sic diutius manere possumus.

An exterior letter, taken out of the first Epistle of Cicero, wherein a Spartan Letter is involved.

Ego

Fig. 35 The Bacon Bi-literal Cipher in the 1640 *Advancement of Learning*

Ego omni officio, ac potius pietate erga te. caeteris satisfacio omnibus: Mihi ipse nunquam satisfacio. Tanta est enim magnitudo tuorum erga me meritorum, ut quoniam tu, nisi perfectam re, de me non conquiescis; ego, quia non idem in tua causa efficio, vitam mihi esse acerbam putem. In causa haec sunt: Annonius Regis legatus aperte pecunia nos oppugnat. Res agitur per eosdem creditores, per quos, cum tu aderas, agebatur. Regis causa, si qui sunt, qui velint, qui pauci sunt, omnes ad Pompeium rem deferri volunt. Senatus Religionis calumniam, non religionem, sed malevolentiam, et illius Regiae largitionis invidia comprobant. &c.

Fig. 36 The Bacon Bi-literal Cipher in the 1640 *Advancement of Learning*

The first fruits of these investigations came in *The Bi-literal Cypher of Sir Francis Bacon Discovered in his Works and Deciphered By Mrs. Elizabeth Wells Gallup* first published in 1899. On examining the prefatory material of the 1623 Shakespeare First Folio, Mrs Gallup produced a series of revelations about Francis Bacon's secret life and enormous corpus of writings. From the verse 'To The Memorie of the deceased Author Maister W. SHAKESPEARE' by Leonard Digges she deciphered the message that Bacon had secretly authored the plays published in the name of not only Shakespeare but also those in the names of Peele, Greene, and Marlowe:

Francis of Verulam is author of all the plays heretofore published by Marlowe, Greene, Peele, Shakespeare, and of the two-and-twenty now put out for the first time. Some are alter'd to continue his history.

Search for keyes, the headings of the Comedies.

FRANCIS of VERULAM.¹⁶⁷

From 'The Names of the Principal Actors in all these Playes' Mrs Gallup revealed the message that Bacon was the concealed son of Queen Elizabeth and rightful heir to the throne of England:

Queene Elizabeth is my true mother, and I am the lawfully heire to the throne. Find the Cypher storie my bookes containe; it tells great secrets, every one of which (if imparted openly) would forfeit my life.

F. BACON.¹⁶⁸

From the Shakespeare First Folio and several of Bacon's own acknowledged works Mrs Gallup brought forward a series of revelations. He was the eldest child of Queen Elizabeth who had secretly married Robert Dudley (afterwards the Earl of Leicester) in the presence of his foster parents Sir Nicholas and Lady Anne Bacon and from the same parentage he had a royal brother known to the world as Robert Devereux, the second Earl of Essex. The decipherments also laid bare some of the aspects withheld from conventional pages of history about his very fraught and difficult relationship with his royal mother Queen Elizabeth and his father Robert Dudley and his exile to France where we learn elsewhere he had a secret relationship with Queen Marguerite of Navarre (an inspiration for *Romeo and Juliet* and a number of his Shakespeare Sonnets) whom he was barred from marrying by his royal mother.

In *The Shakespearean Ciphers Examined* the fraudulent Friedmans after quoting the above passage deciphered by Mrs Gallup relating to Bacon's royal birth imparted one more of their disingenuous and duplicitous statements:

There are indeed one or two things which seem to support it. Nicholas Bacon died in 1579, leaving nothing to Francis, though he left much property to his other sons. The Queen is often alleged to have been amorous and even indiscreet. There is also the curious defaced inscription on one of the walls of Canonbury Tower in London, where Bacon once lived. The inscription names all the monarchs from William the Conqueror to Charles II. Between Elizabeth and James I there are certain letters which might once have been a name; all but one have been chiselled out, but the initial remaining is an F. Some Baconians would claim that it stands for Francis; but who put it there if it was not Bacon and how he knew that Bacon was 'Elizabeth's son' is another matter.¹⁶⁹

The opening part of the statement that there are one indeed one or two things which seem to support it is a piece of shocking mendacity. As the Friedmans were perfectly aware (although were confidently banking on the readers not being) there is a mass of

evidence pointing to and repeatedly confirming Queen Elizabeth gave birth to a child by Robert Dudley, Earl of Leicester in January 1561, which includes contemporary state papers and letters from the chief minister of state Sir William Cecil (married to the sister of Lady Bacon), Spanish and Venetian Ambassadors, English Ambassadors and diplomats, etc, and that the child was Francis Bacon (as well as the will of Sir Nicholas Bacon and several letters written by Lady Bacon) is pointedly alluded to by Bacon's earliest biographers, who were privy to the secret of his royal birth.¹⁷⁰

His first English biographer Dr William Rawley who lived with Bacon for the last ten years of his recorded life in the address to the reader to *Resuscitatio, or, Bringing into Public Light Several Pieces, of the Works, Civil, Historical, Philosophical, & Theological, Hitherto Sleeping* states 'in regard, of the Distance, of the time, since his *Lordships* Dayes; whereby, I shall not tread too near, upon the *Heels* of *Truth*; Or of the Passages, and Persons; then concerned'.¹⁷¹ A method Dr Rawley employs in the very first line of his biography of his Rosicrucian Master, Lord Bacon:

FRANCIS BACON, *the Glory, of his Age, and Nation; The Adorner, and Ornament, of Learning; Was born, in York House, or York Place, in the Strand; On the 22th Day of January; In the Year of our Lord, 1560 [Old Style, i.e. 1561].*¹⁷²

It will be observed that Dr Rawley pointedly says that Bacon was born at York House or York Place, which are two separate buildings, and as he was aware they carried absolutely different meanings and implications for the filial antecedents concerning the secret life of the man who had entrusted him with them. The grand York House was the official residence of the Lord Keeper and Lord Chancellor of England occupied by Sir Nicholas Bacon and York Place (now generally known as the Palace of Whitehall which includes a range of official government buildings among them the Cabinet Office and Ministry of Defence) was Queen Elizabeth's Royal Palace, the main residence of English monarchs from the early sixteenth century. Of course, Dr Rawley who lived and spent several years with Bacon at York House when he was Lord Keeper and Lord Chancellor of England knew the difference between York House and York Place, the royal residence of Queen Elizabeth. He had gone as close to the dangerous heels of truth as he dare by directly suggesting there was some kind of mystery regarding his birth by pointing to York Place, the royal palace of Queen Elizabeth, royal mother of Francis Bacon.

The first English *Life* of Bacon by Dr Rawley pointed to his royal birth and the first *Life* of Bacon published in French repeatedly confirmed it. The 'Discovrs Svr La Vie De M^{re} Francois Bacon, Chancelier D' Angleterre' appeared in Paris in 1631 prefixed to what appeared to be a French translation of Bacon's natural history *Sylva Sylvarum* as *Histoire Natvrelle De M^{re} Francois Bacon, Baron de Verulan, Viscomtede saint Alban, & Chancelier d'Angleterre*. The 'Discovrs Svr La Vie De M^{re} Francois Bacon, Chancelier D' Angleterre' printed in very large type across twenty-six pages contains *information not found in any other biography of Bacon* some of it either provided by Bacon himself or somebody close to him.

Being thus born in the purple (*ne parmy les pourpes*) and brought up with the expectation of a grand career...And as he saw himself destined one day to hold in his hands the helm of the kingdom (*le timon du Royaume*) instead of looking only at the people and the different fashions in dress, as do the most of those who travel, he observed judiciously the laws and the customs of the countries through which he passed, noted the different forms of Government in a State, with their advantages or defects, together with all the other matters which might help to make a man able for the government of men.¹⁷³

To reinforce and confirm the allusion Bacon was born of royalty his first biographer explicitly states he was ‘born in the purple’: as everybody knows purple is the colour of royalty, and Queen Elizabeth herself forbade anyone except close members of the royal family to wear it; thus in other words, Bacon was born in the purple to royalty, a glaring confirmation, that he was the royally born son of Queen Elizabeth. (When Bacon later married at his wedding he wore a suit ‘purple from cap to shoe’). His biographer declares moreover that Bacon ‘saw himself destined one day to hold in his hands the helm of the kingdom’ (helm: in control or head of the country), meaning as son and heir of Queen Elizabeth, that one day he was destined to be King of England, and that he had from a young man studied all forms of government in anticipation of his role as royal head of state for the governance of his kingdom.

His second English editor Tenison, afterwards Archbishop of Canterbury, was also privy to Bacon’s royal birth:

The great cause of his Suffering, is to some, a secret. I leave them to find it out, by his words to King *James*, *I wish* (said he) *that as I am the first, so I may be the last of Sacrifices in your Times*.¹⁷⁴

Following the death of his royal mother Queen Elizabeth, as the concealed heir to the throne Bacon was the rightful King of England, and was thus the first sacrifice of the reign of the usurper King James who was privy to his secret identity.

The Bi-literal Cypher of Sir Francis Bacon discovered in his works was followed by a second and enlarged edition in 1900 and third edition in 1901.¹⁷⁵ Not surprisingly, these works generated a huge amount of controversy on both sides of the Atlantic and even divided Baconians.¹⁷⁶ In response to Mrs Gallup’s critics her publishers issued the pamphlet *Replies to Criticisms* in 1902 followed by an enlarged version *Pros and Cons of the Controversy* in 1906.¹⁷⁷ With the controversy still raging an undaunted Mrs Gallup sailed for England in a failed search for hidden manuscripts at Canonbury Tower and Gorhambury, the previous homes of Bacon, which produced *The Lost Manuscripts* issued in 1910.¹⁷⁸ After her return to the United States she was introduced by a mutual friend to Fabyan who invited her along with her sister Miss Kate Wells to Riverbank where he provided her with a staff and extensive resources to continue her investigations, one of those staff working under Mrs Gallup, was of course, Elizebeth Smith whose future husband William Friedman had joined the Riverbank project the year before her own arrival.

After spending some months at Michigan Agricultural College William Friedman had moved to Cornell University to study Genetics where he received a BSC in 1914. He continued his postgraduate studies at the university’s College of Agriculture for the next year studying plant breeding, plant physiology, botany and chemistry, as well as spending time teaching undergraduates. In the late spring of 1915 his supervisor Professor Rollins A. Emerson received an unsolicited letter from Fabyan, asking him to recommend a qualified person to take charge of the Department of Genetics at his Riverbank Laboratories in Geneva, Illinois. The professor recommended Friedman. After several meetings Friedman accepted Fabyan’s offer and he arrived at Riverbank in the summer of 1915. Elizebeth Smith (afterwards Friedman) later recalled:

There were some scientists on the estate who were very happy to have my company. We swam in the Roman swimming pool; we bicycled over the country roads; and we drove occasionally in a roaring Stuts Bearcat. These young men were employed by Colonel Fabyan on one or another of his activities...[He] was also interested in genetics and had established a greenhouse and adjoining laboratory for the conduct of experiments in the field. His

geneticist was a dark-haired young man, who experimented with the fruit fly and with plants, testing the Mendelian Law of heredity. There was a windmill in the center of the area where the geneticist worked and Colonel Fabyan had constructed a sort of studio on the second floor where the young man lived. I saw him at meal times and on off hours when all of the young people on the place were swimming, bicycling and riding. As time went on, the geneticist was found to be an accomplished photographer. So he was pressed into service by Colonel Fabyan who believed that enlarging the type forms in Elizabethan books would show up the differences which Mrs. Gallup claimed was there. This work threw us together a very great deal, and we were married within the year.¹⁷⁹

The nuptials which took place on 1 May 1917 was a marriage made in crypto-heaven: the newly married Mr and Mrs Friedman were destined to become ‘the most famous husband-and-wife team in the history of cryptology’,¹⁸⁰ whose future service to their country in the emerging field of cryptology in the difficult and dangerous times that lay ahead would rank second to none.

Although the two recent arrivals William Friedman and Elizebeth Smith had no previous knowledge or experience in the arcane and secret field of cryptology they quickly became fascinated with the lively discussions and efforts to identify Baconian ciphers in the Shakespeare Folio and other Elizabethan works and not long after his arrival at Riverbank William abandoned genetics and soon found himself Head of the Department of Ciphers at Riverbank.

Unfortunately the years spent by the Friedmans at Riverbank is not well documented and what very little is known about their day to day work and collaboration with Mrs Gallup is virtually entirely supplied from memory by the Friedmans themselves some forty years later, in what became a very carefully constructed narrative, albeit not one without certain inconsistencies and anomalies. In their own various accounts they told how the versatile Fabyan implemented a well-planned campaign to win some degree of academic respectability for Mrs Gallup’s work on the Bacon Bi-literal Cipher, in which they, the Friedmans, found themselves front and centre.

Fabyan would invite prominent scholars to Riverbank from all around the United States of America all at his expense. The doyens of academia were fed, housed and entertained at his personal villa and in-between the victuals and entertainments they were urged to observe and examine all stages and aspects of the decipherment process and similarly encouraged to give vent to their inquiring minds and freely question and discuss with Mrs Gallup any aspect of her work.

On the first day of their arrival the scholars were treated to a well-organised lecture on the bi-literal cipher using lantern slides and photographic negatives supplied by William Friedman. In the meantime the ever ready Fabyan passed round old books on ciphers. In this convivial atmosphere the conversation positively danced along with pointed allusions to the ‘more picturesque portions of the Elizabeth-Leicester-Bacon story or the Canonbury inscription’. Their academic minds were, write the Friedmans, ‘given an alternation of sedatives and sharp shocks: a sort of Baconian brainwashing’ and apparently with no regard for their own honesty and integrity they, together with (they said) other members of the Riverbank staff ‘had it borne in upon them that they should watch their tongues-with good reason, for they were becoming disillusioned with the whole affair.’¹⁸¹ What the fraudulent Friedmans did not make plain was their own active participation in this so-called ‘Baconian brainwashing’:

In the late summer of 1916 he [Fabyan] began to lean on Elizebeth for help. He had already realised that when she spoke, even though she was only twenty-four, people listened to her-

her good looks caught the eye of men and her precision and earnest intelligence held attention....

...And Elizebeth played her part. If a visitor grew sick of listening to Fabyan and turned to Elizebeth, asking what she thought, she said she was convinced that the work was solid, that the messages were really there.

Privately, though she was beginning to doubt.¹⁸²

In other words, Elizebeth gave an accomplished performance and played her role to perfection while apparently 'lying' to her distinguished academic guests. A habit she and her husband William Friedman learned early which they continued to practice for the rest of their lives when deceiving countless academics around the world about the authenticity and presence of Baconian ciphers in the Shakespeare plays.

The Riverbank Cipher Department headed by Friedman consisted of around fifteen members of staff who were charged with among other things to assist in the process of preparing several books and pamphlets explaining the method of Mrs Gallup's bi-literal system and involved assigning the individual letters of two type fonts found in various Elizabethan and Baconian works. Much of the work carried out by staff at the Department of Ciphers was directly overseen and collated by Elizebeth Friedman.¹⁸³

The Friedmans explained the process. His part in the investigation was described as 'phase one' and Elizebeth's part in the process 'phase two':

For basically there were two operations to be performed; first the *a*-forms and *b*-forms of the letters had to be identified; then the identification had to be applied to the printed texts in the endeavour to find messages. For the first task, what had before been done by one or two amateurs was now done on a large scale.¹⁸⁴

Without here stating who the photographer in question was, the Friedmans continued to describe the process:

Photographic enlargements were made of page after page of printed books where various type fonts were used; the enlargements were cut up, and divided into two classifications according to the letter form. 'Alphabet classifiers' were prepared, providing master-forms for the *a*-form and the *b*-form of each capital and small letter. These could then be placed over a page so that individual letters could be checked against them. Mrs Gallup had always said that the differences, though just visible to the naked eye, were minute; but they were expected to become clear on enlargement. This was not so; rather the opposite. Indeed, the differences between letter shapes often turned out to be ascribable to what the printer calls ink-spread (where the ink is absorbed into the paper in a halo round the outline of the letter) or to imperfections in the surface of the paper, or to damaged type.¹⁸⁵

The photographer for some reason not named here by the Friedmans in their book *The Shakespearean Ciphers Examined* (to be read by the public) was none other than Mr Friedman. They were however a little bit more forthcoming in their unpublished typescript version deposited at the Folger Shakespeare Library:

In Chapter V we made it clear, we hope, that we were more than disinterested observers on the scene at the Riverbank Laboratories where and when Mrs. Gallup lived and did her last work: one of us (Elizabeth [sic] S. Friedman) participated actively in the work there, first as a student and then as a co-worker with Mrs. Gallup for over a whole year and as a full-time vocation, while the other (William F. Friedman), although engaged in research in an altogether different field entirely separate from the work of Mrs. Gallup, took a considerable interest in her researches and, in fact, during leisure hours was glad to be of assistance to her

by way of making drawings and plates of one sort or another at the request of Colonel Fabyan, her patron. These plates now figure prominently in those publications of the Riverbank Laboratories which deal with the work of Mrs. Gallup on the biliteral cipher, but the fact that they were prepared as herein indicated does not necessarily imply any indorsement whatever of the work of Mrs. Gallup. In fact, like most others, we did not endorse or subscribe to that work, for Mrs. Gallup's theories and her results as a general rule strained the credulity of most investigators and we were no exceptions.¹⁸⁶

A number of the students marked by eye the two forms of italic type on hundreds of pages of print Elizebeth 'then collated their markings into a master copy; she assigned the forms as the result of a tally. The letters were then divided into groups of five.' Mrs Friedman or Miss Kate Wells 'then tried to get the message. When they failed, as they invariably did, to get more than a word or two, the text was taken to Mrs Gallup, who produced extensive readings with little apparent effort. Mrs Friedman would then say, 'But you must have changed some of the assignments'; she would reply that we had all failed to see a dot or an accent which changed the assignment, not noted the position of the dot over an 'i', and so on. This happened in texts which she had not deciphered before and also in those which she had deciphered and given the students as work-sheets: she always had some explanation for failure to see what she saw.' In drawing their account to a close Mrs Friedman recalled:

I became confused and then sceptical, but I suspended judgment as long as I could. For some time my admiration was stimulated by her facility in reducing what I brought to her as wholly unintelligible successions of *a* and *b* assignments to successive groups of five, in which the *a*'s and *b*'s fitted Bacon's alphabet key and from which she readily produced intelligible messages. After months of struggling without success to see her interpretation of the founts, and to produce hidden messages of my own, my admiration for her facility turned to uneasy questioning, and then to agonizing doubt, and then to downright disbelief.

I can state categorically that neither I nor any other one of the industrious research workers at Riverbank ever succeeded in extracting a single long sentence of a hidden message; nor did one of us so much as reproduce, independently, a single complete sentence which Mrs Gallup had already deciphered and published.¹⁸⁷

To gild the lily the Friedmans could not resist another piece of duplicity which they knew to be completely false (as would any professional cryptographer or anyone else for that matter who possesses little more than a basic understanding of the Bacon Bi-literal Cipher):

It is fitting here to point out once more that in any true cryptogram any given number of decipherers must, and will, arrive at the same solution.¹⁸⁸

During this period the Riverbank Cipher Department headed by Friedman produced a series of pamphlets collectively known as the Riverbank Laboratories Publications on Cryptography, comprising in total more than twenty publications. In looking back over their time spent at Riverbank and the cryptographic works produced by its Department of Ciphers the Friedmans always took great pains to emphasise that these cryptologic publications fell into two distinct categories 'Now it must be emphasized and clearly understood that those publications were of two very different sorts.'¹⁸⁹ It was to be clearly understood that in the one category there were a series of technical monographs dealing with both cryptography and cryptanalysis and another distinct category dealing with Mrs Gallup's work on the Bacon Bi-literal Cipher.

The technical monographs were published anonymously without initials or any other form of identification of its authorship on their respective title pages. These publications were copyrighted in the name of George Fabyan, usually on the inside page, 'Copyright GEORGE FABYAN'. Due in some part to their small print run the original editions of these Riverbank technical writings are extremely rare and very difficult to obtain and even more so those publications dealing with the Bacon Bi-literal cipher. Thus from the very beginning a mystique and mystery has surrounded the Riverbank cipher publications and the name of their authors were unknown to all but a few, save the staff at the Department of Ciphers at Riverbank. Such was the secrecy surrounding these works one of them *The Index of Coincidences and its Applications* translated into French as *L'Indice du Coïncidence et ses Applications en Cryptographie*, prior to the English version appearing, was at first assumed to have been the work of General Cartier Head of the cryptological service of the Deuxieme (G-2) of the French Army General Staff.¹⁹⁰ The identity of the authors of the technical monographs have long been known, however the identity of the author(s) of some of the Riverbank publications dealing with the Bacon Bi-literal Cipher remain unknown to the present day.

In their typescript housed in the Folger Shakespeare Library the Friedmans list the series of technical works which began with No. 15:

These publications, dealing with cryptography and cryptanalysis as technical fields in cryptology, were as follows (all except Nos. 19, 21, 50 and 75 were by William F. Friedman; No. 19 was by Lenox R. Lohr and William Friedman; No. 21 was by William F. Friedman and Elizabeth [sic] S. Friedman; Nos. 50 and 75 [not cryptographic, strictly speaking] were by H. O. Nolan):

- No. 15 *A method of reconstructing the primary alphabet*, 1917, pp. 9.
- No. 16 *Methods for the solution of running-key ciphers*, 1918, pp. 42.
- No. 17 *An introduction to the methods for the solution of ciphers*, 1918, pp. 46.
- No. 18 *Synoptic tables for the solution of ciphers*, 1918, pp. 16.
- No. 19 *Formulae for the solution of transposition ciphers*, 1918, pp. 24.
- No. 20 *Several machine ciphers and methods for their solution*, 1918, pp. 58.
- No. 21 *Methods for the reconstruction of primary alphabets*, 1918, pp. 14.
Synoptic tables for the star cipher, 1918, pp. 27.
- No. 22 *The Index of coincidence and its applications in cryptography*, 1922, pp. 87.
- No. 22 *L'indice de coïncidence et ses applications en cryptographie*, 1921, (French) (Translation of preceding)
- No. 22 Part II *Decryptement du system cryptographique du Commandant Schneider*, 1921, pp. 32. (A French translation of Part II of Pub. No. 22, French)
- No. 22 Appendix *An application of the science of statistics to cryptography*, 1922, pp. 8.
- No. 22 Appendix *Application des methodes de la statistique a la cryptographie*, (French) 1922, pp. 8. (A French translation of the paper under the English title above)
- No. 50 *The production and detection of messages in concealed writings and images*, 1918, pp. 20.
- No. 75 *Memorization methods specifically illustrated in respect of their Applicability to codes and topographic material*, 1919, pp. [blank].¹⁹¹

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As one would expect the Friedmans had no difficulty whatsoever in identifying those works written by Mr Friedman, as well as the works he closely collaborated with Mrs

Friedman, and the name of those other authors, who had written works placed in this category.

The information concerning the Riverbank publications dealing with the Bacon Bi-literal Cipher is contradictory and to the present day their number remains uncertain, with their number differing according to which source one examines.

If we turn to the Friedmans' book *The Shakespearean Ciphers Examined* the source of information for nearly all scholarly and ordinary inquiries, the title, author, and date of publication of the Baconian Riverbank publications is briefly mentioned in two places throughout their book. The information rather than being clear, detailed and precise, as one would expect from two cryptologists who placed great emphasis on the critical importance of accuracy, and when it suited vigorously insisted on the vital importance of all necessary and pertinent information in others, is inconsistent and conspicuously deficient in several important points of detail. Firstly, they say (and I here quote in full):

While she [Mrs Gallup] was there, Fabyan issued in his series of Riverbank publications six small items relating to the biliteral cipher.¹⁹²

Not a single mention of the individual title, date of publication or author of any of the six publications. One of which could hardly be described as small running as it does to a hundred pages. In between the thirty-two pages when the Friedmans next made brief mention of the Riverbank Bacon Bi-literal Cipher publications the number had mysteriously reduced to five (and here again I quote in full):

There were five of them; four dealing with what was called 'The Greatest Work of Sir Francis Bacon', and one called *Ciphers for the Little Folks*.¹⁹³

This in a book *The Shakespearean Ciphers Examined* running to 303 pages in which its final six chapters are assigned to the examination and discussion from various different perspectives of their time at Riverbank, Fabyan, Mrs Elizabeth Wells Gallup, and the Bacon Bi-literal Cipher, wherein the Friedmans devote a mere two sentences to the five or six works on their investigations into the Bacon Bi-literal Cipher! This remarkable fact alone should have raised huge red flags in the minds of Shakespeare scholars, the international press, and the rest of sleepy, ignorant and deluded world.

Writing in their unpublished *The Cryptologist Looks at Shakespeare* now held at the Folger Shakespeare Library in Washington, on which their book *The Shakespearean Ciphers Examined* is based, the fraudulent Friedmans include more information albeit still inaccurate and incomplete which they chose to suppress in their book (once again here quoted in full:

:

These publications dealing with the biliteral cipher were as follows:

Powell, J. A. *The Greatest Work of Sir Francis Bacon*, 1916, pp. 14

Anon, *Hints to the decipherer of The Greatest Work of Sir Francis Bacon*, 1916, pp. 15

Pott, Mrs. Henry. *Hints for deciphering The Greatest Work of Sir Francis Bacon*, n.d. pp. 17.

Anon, *The keys for deciphering The Greatest Work of Sir Francis Bacon*, 1916,

Crain, Dorothy. *Ciphers for the little folks*, 1916, pp. 73.¹⁹⁴

As seen above, there are only five not six titles listed, and one of these was not even published by Riverbank Laboratories. Of the five that are listed above, three of the publications (two of which were published by Riverbank Laboratories) have the name of their author listed on the respective title pages. Why when the Friedmans 'were the Cipher Bureau at Riverbank' a bureau headed by the Friedmans, are two of the tracts listed as anonymous? Undoubtedly, the Friedmans knew the identity of the author or authors of these publications so why did they not name them in either the unpublished typescript or their universally celebrated book *The Shakespearean Ciphers Examined*, as well as going to their respective graves not naming them? Why the conspiracy of silence?

The Riverbank Bacon Bi-literal Cipher publications were first listed by Galland in *An Historical and Analytical Bibliography of the Literature of Cryptology* in 1945:

Crain, Dorothy. *Cipher for the little folks; a method of teaching the greatest work of Sir Francis Bacon, Baron of Verulam, Viscount St. Alban; designed to stimulate interest in reading, writing and number work, by cultivating the use of an observant eye; with an appendix on the origin, history and designing of the alphabet, by Helen Louise Ricketts*. Riverbank Laboratories, Educational Department, Geneva, Ill., 1916. pp. 73.¹⁹⁵

Fitzhugh, Mildred. *Jerry and the Bacon puppy. Riverbank edition*. Geneva, Ill.: The Riverbank Press, 1916. pp. 25.¹⁹⁶

The one other work to carry the name of its author is listed in the appropriate place under J. A. Powell. Presumably, for convenience as there is no classification allotted for works issued anonymously, Professor Galland also includes those other Riverbank publications issued anonymously which deal with the Bacon Bi-literal Cipher under the entry J. A. Powell:

Powell, J. A. *The greatest work of Sir Francis Bacon, Baron of Verulam, Viscount St. Alban*. Geneva, Ill.: Riverbank Laboratories, 1616. pp.18.

The first of twelve lessons in the fundamental principles of the Baconian ciphers. . .and application to books of the sixteenth and seventeenth centuries. Geneva, Ill.: Riverbank Laboratories, c. 1916. pp.16.

The greatest work of Sir Francis Bacon, Baron of Verulam, Viscount St. Alban, his contribution to the science of cryptography and enciphered Writings. Compiled by George Fabyan. Geneva, Ill.: Riverbank Laboratories, 1922? pp. 80.

[See Lange et Soudart, *Traite de cryptographie*, pp. 37, 92, 293; Pratt, *Secret and urgent*, pp. 106-108.]

The keys for deciphering the greatest work of Sir Francis Bacon, Baron of Verulam, Viscount St. Alban. Geneva. Ill.: Riverbank Laboratories, 1616. pp. 100.

Hints to the decipherer of the greatest work of Sir Francis Bacon, Baron

of Verulam, Viscount St. Alban. Geneva, Ill.: Riverbank Laboratories,
1616. pp.15.¹⁹⁷

It is immediately clear that there exists a number of discrepancies between Professor Galland's list and the one provided by the Friedmans. The confusion regarding these discrepancies is compounded by errors and lacunae in the bibliographical information contained in both lists. It seems that Professor Galland had not personally examined all of the publications listed for convenience under J. A. Powell. For example, he was unsure as to the date of two of the publications listed under Powell denoted by his use of the abbreviation *c.* He was moreover under the mistaken impression that the work actually written by Powell consisted of 18 pages, whereas the publication runs to only 14 pages. Similarly, the Friedmans include a work by Constance M. Pott, *Hints for Deciphering The Greatest Work of Sir Francis Bacon* in their list of Riverbank Bacon Bi-literal publications; apparently having not seen it, they are unable to give a place or date of publication. This work is listed separately by Galland under its author:

Pott, Mrs. Henry (Constance Mary Fearon) *The biliteral cipher: hints for deciphering.* London: R. Banks & Son, 189-? pp. 20.¹⁹⁸

Unlike Professor Galland, the Friedmans studiously truncated list fails to register the anonymous *The First Twelve Lessons in the Fundamental Principles of the Baconian Ciphers and Application to Books of the Sixteenth and Seventeenth Centuries*. Adding to the confusion is the publication absent from the list provided by the Friedmans but included by Galland: *The Greatest work of Sir Francis Bacon. . .his contributions to the science of cryptography, and enciphered writings. Compiled by George Fabyan.* Under its entry Professor Galland instructs his readers to see *Secret and Urgent* by Fletcher Pratt. Unfortunately Pratt's work, itself prone to 'errors and omissions...false generalizations based on no evidence and his unfortunate predilection for inventing facts',¹⁹⁹ makes no direct reference to the work nor does the foreign source cited by him. A copy of this work does appear to exist but apparently dates from 1916 not 1922 and is not readily available in libraries and institutions in the UK and the US. Most importantly however Galland fails to point out that three Riverbank publications on the Bacon Bi-literal Cipher were issued anonymously.

None of the modern standard works on cryptology make specific reference to, or discuss the contents or authorship of the anonymously published Riverbank works on the Bacon Bi-literal Cipher. The great historian David Kahn in his standard work on the history of codes and ciphers devotes a chapter to W. F. Friedman (in conjunction with Yardley) in which he assigns several pages to Friedman's Riverbank technical monographs. Yet while Professor Kahn goes on to discuss the indisputable merits of Friedman's technical monographs he makes no mention here of the other Riverbank publications regarding which the Friedmans were deeply involved. Kahn returns to the Friedmans and Riverbank in his chapter 'The pathology of Cryptology' which is almost entirely devoted to the various individuals who have attempted through the use of ciphers real or imagined to show that Bacon was the author of the Shakespeare works, including Mrs Gallup, and the bi-literal cipher. Perhaps understandably Kahn seems to take his lead from his principle source the Friedmans and their book *The Shakespearean Ciphers Examined* in repeating similar criticisms of the methods employed by Baconian scholars and enthusiasts. Of their time spent at Riverbank working with Mrs Gallup on the Bacon Bi-literal Cipher Kahn repeats the account

given by the Friedmans. Yet for some very curious reason, regarding the Riverbank publications on the Bacon Bi-literal Cipher, Khan has nothing whatsoever to say.²⁰⁰

No more light was shed on the Riverbank works on the Bacon Bi-literal Cipher by Ronald W. Clark in his biography of Friedman *The Man Who Broke Purple*. All the more surprising for in his acknowledgements Clark thanks Mrs Friedman as well as other members of her family for the co-operation he had received in researching and writing a book in which he assigns nineteen pages to their time spent at Riverbank.²⁰¹ In 1997 David Newton issued the first encyclopaedia on cryptology which he suitably titled *Encyclopedia of Cryptology*. In the index of this very useful tool Newton gives entries for both Riverbank and Riverbank publications. The entry for Riverbank reads 'See Fabyan, George' and for Riverbank Publications 'See Friedman, William'. The encyclopaedia assigns an entry for George Fabyan and a separate entry each for Mr and Mrs Friedman. Neither the entry for Colonel Fabyan or Mrs Friedman makes any mention of the Riverbank publications. As denoted by the index the entry for William Friedman actually does refer to the Riverbank publications. It does not however make reference to the Riverbank publications on the Bacon Bi-literal Cipher:

Soon after Friedman was appointed head of the Department of Ciphers at Riverbank, the United States entered World War I. The government began sending him ciphers to decrypt and young officers to train in the principles of cryptography and cryptanalysis. One consequence of these assignments was a series of publications, called Riverbank Publications, on a wide variety of topics in cryptology. These included such subjects as *A Method of Reconstructing the Primary Alphabet from a Single One of the Series of Secondary Alphabets* (the first in the series), *Methods for the Solution of Running-Key Ciphers*, *An Introduction to Methods for the Solution of Ciphers*, *Methods for the Reconstruction of Primary Alphabets*, and *Index of Coincidence and Its Applications in Cryptography*.²⁰²

Prior to Newton's *Encyclopedia of Cryptology* a second bibliography devoted to cryptology appeared in 1976. The work *An Annotated Bibliography of Cryptography* was the result of more than twenty five years' work by its compiler David Shulman. In his review 'The Biggest Bibliography' Kahn criticises it for its 'faults, both great and small', its layout, lack of annotation, its inconsistency and far too many errors of detail. He acknowledges however that it 'will accelerate the progress of cryptologic research' and praises Shulman for bringing 'to light many unknown items that would have otherwise have lain forgotten in the library stacks of the world'. Despite its faults this bibliography, writes Kahn, is the 'best ever' and undoubtedly 'the most complete bibliography of its subject ever published'.²⁰³ Indeed students of cryptology around the world owe an great debt of gratitude to Shulman for his painstaking labours which unearthed a number of extremely rare books on cryptology, some of which were not previously known to exist. These included an extremely rare and previously unknown book on cryptology by Vandluis Hamid entitled *The entire art of wryting in secret, or the dissimulation of one's thoughts so that the true meaning may not be disclosed to the uninitiated*. This early work published in London in 1647 running to 312 pages is dedicated to 'Lord F.B'. In the entry for the work Shulman reveals a copy of it resides at the Vatican Library. No other library is listed as holding a copy.²⁰⁴ Shulman also reproduced the title page of a unique copy of Bacon's 1605 edition of *Advancement of Learning*. Scrawled across the title page of this unique copy owned by Princeton University Library is a 'cipher in a contemporary hand'.²⁰⁵

In his bibliography he departed from the usual norm of listing works alphabetically instead the printed and manuscript works were listed in chronological order. The list of printed works was divided into two parts: Part 1: 'A chronological lists of books

and magazine articles from 1518 to 1976' and Part II: 'A chronological list of items that relate indirectly to cryptography'. The first chronological list includes numerous works written by Friedman while he was head of the Riverbank Cipher Department. The Riverbank publications on the Bacon Bi-literal Cipher are relegated to Part II. Unfortunately, the list is both inaccurate and misleading:

Crain, Dorothy. Ciphers for the Little Folks. A Method of Teaching the Greatest Work of Sir Francis Bacon. . .Designed to stimulate interest in Reading, Writing, and Number Work... With an appendix on the Origin, History and Designing of the Alphabet by Helen Louise Ricketts. Riverbank Publ., 1916. 73 p. 8x10". DLC. Also, a translation in French, 1918. DLC, University of Pennsylvania Library.

Fabyan, George. The first of twelve lessons in the fundamental principles of the Baconian ciphers...Riverbank Lab., Geneva, Ill., 1916. 8 1 incl. tables. 25 cm. NN. Evidently, Colonel Fabyan, probably a wizard in acoustics, was bitten by the Bacon bug. He later donated his excellent collection of books on ciphers to the Library of Congress.

(Fabyan, George). The keys for decyphering Francis Bacon's Greatest Work. Riverbank Lab., Geneva, Ill., (1916). 100 p. Illus. 26 cm. NN.

Fitzhugh, Mildred. Jerry and The Bacon Puppy. Showing young people some of the reasons why the sport of horse racing is prohibited. Riverbank., Publ., Geneva, Ill., 1916? 24 p. 8 x 9 3/4". In Sinnott collection. A pamphlet relating to Baconian controversy.

Powell, J. A. The Greatest Work of Sir Francis Bacon. Riverbank Lab., Geneva, Ill., 1916. 14 p., 3 pl. 25x20 1/2 cm. NN.²⁰⁶

Inexplicably the list altogether fails to record one Riverbank publication *Hints to the decipherer of the greatest work of Sir Francis Bacon*. This is remiss of Shulman: the work is listed by Professor Galland whose bibliography he was familiar with. In contrast to Galland who placed them under his entry for J.A. Powell, having as he did no category for anonymous works, Shulman lists both *The First Twelve Lessons* and *The Keys for deciphering* (here spelt decyphering) under Colonel Fabyan. Although copyrighted by him neither work was written by Fabyan. Like Galland before him, Shulman fails to point out that the two of the works he lists under Fabyan were issued anonymously.

In short, no printed work including *The Shakespearean Ciphers Examined* by the Friedmans, Kahn's standard work *The Codebreakers*, the biography of Friedman *The Man Who Broke Purple* by Ronald Clark, the standard bibliographies *An Historical and Analytical Bibliography of Cryptology* by Galland and Shulman's *An Annotated Bibliography of Cryptography* as well as the more recently published *Encyclopedia of Cryptology* by Newton once mentions that three Riverbank publications on the Bacon Bi-literal Cipher were written anonymously. The only source to state that two of the Riverbank works on the Bacon Bi-literal Cipher were written anonymously is the Friedman's typescript *The Cryptologist Looks at Shakespeare* (an earlier version of their book in which this critically important information is carefully edited out) held by the Folger Shakespeare Library; an unpublished source from which the relevant information has never been cited by any subsequent scholar. Thus the particular page referring to the anonymously issued Riverbank publications on the Bacon Bi-literal Cipher has never been cited or their very important anonymity ever once mentioned or discussed in any subsequent printed work including the three modern full-length bibliographies on Elizebeth Friedman with the most recent by Amy Butler Greenfield

The Women All Spies Fear Code Breaker Elizebeth Smith Friedman and her Hidden Life published this year in 2021.²⁰⁷

The silence and secrecy which has continued to surround the Friedmans and their time spent at Riverbank has been further exacerbated by the inaccessibility of the Riverbank Publications on the Bacon Bi-literal Cipher. It is virtually impossible to purchase a full set of these six Riverbank publications on the rare book market and the full set has not been reprinted. The inaccessibility of these publications is further compounded by the remarkable fact that copies of the six are not listed or held by leading libraries in the United Kingdom. For example, the British Library hold no copies of any of these six Riverbank works and nor does the Cambridge University Library. The Bodleian Library holds a single copy of *The Keys for Deciphering the Greatest Work of Sir Francis Bacon* listed under author as Riverbank Laboratories and a single copy of *The Fundamental Principles of Baconian Ciphers* is held by the University of London listed under George Fabyan. So in total the leading English libraries hold only two of the six Baconian Riverbank publications.

Locating these six publications in US libraries prior to the publication of Shulman's bibliography (a work which itself not easily obtained in the United Kingdom) would have defeated all but the most determined inquirer. According to the information I have received from the libraries themselves the Folger Shakespeare Library holds no copies of the six Baconian Riverbank publications. The private George C. Marshall library home to the Friedman collection, donated by Mrs Friedman, are unable to say if or how many of the six they might possess, as the mass of Friedman and Riverbank material has not yet been accurately catalogued. Shulman states that the New York Public Library possesses copies of *Fundamental Principles of the Baconian Ciphers* listed by them as 'compiled by George Fabyan', *The Keys for Deciphering*, and *The Greatest Work of Sir Francis Bacon* by J. A. Powell; and states that a copy of *Cipher for the Little Folks* by Dorothy Crain is held by the University of Pennsylvania. It is worth mentioning in passing the New York Public Library has a relatively unknown large Bacon-Cipher collection casually situated in many boxes which includes a mass of unrecorded Riverbank material. It is the Library of Congress, home to the George Fabyan collection, which boasts the largest number of these Riverbank publications with four: *The Greatest Work of Sir Francis Bacon* by J. A. Powell, *Cipher for the Little Folks* by Dorothy Crain, *Hints to the Decipherer* listed under George Fabyan, and *Keys for Deciphering* listed under Riverbank. It transpires that no public library in the United Kingdom or the United States of America, or the rest of the world for that matter, possess a full set of the six Baconian Riverbank publications.

The scarcity and inaccessibility together with the lack of complete and accurate information regarding the Baconian Riverbank publications only partly explains why so little is known about these works and their content. The complete lack of detailed knowledge regarding their contents is partly explained by the fact that for more than a century since their publication in 1916 they have been either ignored or overlooked by all Bacon/Shakespeare scholars of all colour and persuasions, the vast majority of them blissfully unaware of their existence or vital importance, and lack of comment with which they are met with in standard cryptologic works. This inexcusable deficit of editorial attention by the various so-called authorities in their respective fields has inadvertently helped to maintain and perpetuate the secrecy which has surrounded the Baconian Riverbank works from the very beginning and regrettably the Friedmans who jointly headed the Riverbank Cipher Department and played an integral part in their production, throughout their whole lifetime chose to remain steadfastly silent on

what is still the most important secret about these anonymous Riverbank works: *the secrecy of their authorship*. To understand why this secrecy was systematically maintained by the Friedmans (and others in certain quarters) we need to turn our attention to the publications themselves and examine their contents and finally reveal the identity of the individual (s) responsible for those work on the Bacon Bi-literal Cipher written anonymously.

The twenty page booklet *The Biliteral Cipher: hints for Deciphering* by Constance Pott was not, as indicated by the Friedmans, published by Riverbank Laboratories. It was published at London by Robert Banks & Son. Its title page is undated. The work by Pott (founder of the Francis Bacon Society) provides a lucid and detailed step by step explanation of the Bacon Bi-literal Cipher and the practical difficulties of its application, which Pott, who had evidently closely studied its subtleties at length, stresses is far from unassailable for the patient and diligent investigator. As with the anonymous author of the Baconian Riverbank publications Pott says that a decipherer of the Bacon Bi-literal Cipher must approach its decipherment with the important aid of scientific tools and method:

III. - OF ANGLES, AND HOW TO APPLY THEM TO THE BILITERAL CIPHER

(The decipherer should supply himself with a small quadrant or projector, a fine 4-inch rule, or some cards cut to right angles.)

1. Roman type consists of letters standing perpendicular to the base. Italics slant from the right *downwards*. Italics of two different founts differ, *not so much in form as in slope* or slant. They are distinguishable most readily (in books of the later period at least), not so much by their shape, size, or thickness as by *the angle formed between their chief upright line and the base*. It appears to be a rule that alphabet A should have its chief lines sloping 10° , and alphabet B 15° , from the perpendicular.

2. In the letters of many old books we are struck by the irregularity of the *level* of the letters. The words seem often to have been printed almost without regard to a base line. Still, there is a regular irregularity. We do not observe these things long before we become convinced that they are no matters of accident or of carelessness, but of premeditation and “cunynge,” or skill.

The printer evidently did plant his letters upon a straight line, but the letters were so cut upon the die that, when arranged for printing, some should touch the base line, others be raised above it.

This is plainly visible in Spedding’s Edition of “Bacon’s Works” (1875; see vol. iv., pp. 446, 447). Here Cicero’s epistle is translated into English, with the Spartan letter (also translated). This message, enlarged in modern type, shows how the irregularity of level helps us to decipher. It also proves how well the whole principle of the Biliteral Cipher is understood by a certain circle of literary men, and certainly by the printers of Messrs. Spottiswoode.

The difference of level is here seen very distinctly, but take heed that in the cipher books all such differences are *very slight*. The eye must be trained to distinguish them, for the width of a “line” is sufficient, and persons accustomed to drawing and measuring microscopic insects will be most apt pupils for this work. But Francis has prepared us for this. “He that distinguisheth not in small things makes errors in great.” That is a true saying, and the minute distinctions, although to an inexperienced eye almost inscrutable, become, by study, readily perceived; for, again, “Everything is subtle till it be conceyved.” Once “conceyved,” or perceived, it is no longer so subtle as to escape comprehension.

Certain objects casually introduced into some old books persuade the writer that special instruments, or implements for measuring, were used by the old type-cutters and founders; and in scientific collections very delicate instruments may be seen which could measure

levels and angles to an extreme nicety, and some of which were known in the Elizabethan age.²⁰⁸

The Baconian Riverbank publications by Mildred Fitz-hugh and Dorothy Crain were written for a younger audience. *Jerry and the Bacon Puppy Showing young people some of the reasons why the sport of Horse Racing is prohibited* carries the name of its author Mildred Fitz-hugh on its title page. The small pamphlet contains a total of 24 pages. It is a pleasingly easy to read simple story aimed at a young readership. The story centres around a plaster-puppy called a Bacon Puppy whose ‘absurdly quizzical expression in the rolled eyeballs, was symbolic of many intellectuals’ attitude toward the theory that Francis Bacon was the author of the immortal plays always attributed to Shakespeare.²⁰⁹ On lifting the Bacon puppy up to the light at first glance it revealed nothing unusual. When Jerry turned the cast completely over ‘At first he saw nothing strange about the white plaster bottom of the base, but on closer inspection he noticed that long columns of small letters had been scratched on the apparently smooth surface.’²¹⁰ On looking more closely he discovered that in the five columns the only letters used were *a* and *b* which ‘were arranged with an exactness which suggested some special order or system.’²¹¹ The sixth column that was separated from the others was of an ordinary alphabet from A to Z.²¹² He turned his attention to the columns of *a* and *b* scratched into the plaster surface and half-forgotten stories of secret messages adroitly concealed within ciphers began to run through his head:

Cipher? Where had he heard that word recently? Jerry stared at the puppy in puzzled thought, and then with unexpected suddenness it came to him-the Baconian Cipher. Several months before, the papers had been full of it, featuring its various phases. It was so simple, the various accounts had insisted, that children in kindergartens could grasp and enjoy it, once they had learned its composition. But, at the same time, it was so subtle, that for years Bacon’s secret histories had been hidden from even the eyes of prying students-men familiar with the works which contained those secrets and which bore the name of William Shakespeare as the gifted author.

The basic principle of this cipher, the papers went on to say, was the use of two very similar but still distinguishable forms of type for each letter of the alphabet, both capital and small. In this way a page of ordinary printed matter could easily be made to contain a hidden message without arousing the least suspicion.²¹³

In the same year as Riverbank Laboratories issued Mrs. Fitz-Hugh’s pleasing and instructive read Dorothy Crain, Director of the Riverbank Kindergarten, along with Helen Louise Ricketts compiled a book which would also in a straightforward manner communicate the basic tenets of the Bacon Bi-literal Cipher to children of school age. The simple instruction manual *Ciphers For the Little Folks A Method of Teaching The Greatest Work of Sir Francis Bacon Baron of Verulam, Viscount St. Alban Designed to Stimulate Interest in Reading, Writing and Number Work, by Cultivating the Use of an Observant Eye. With an Appendix on the Origin, History and Designing of the Alphabet* by Helen Louise Ricketts runs to 73 pages. The names of its authors Dorothy Crain and Helen Louise Ricketts are printed on the title page. On the inside page prints appears ‘Copyright, 1916 GEORGE FABYAN’. The end of the introduction is signed by Dorothy Crain and the appendix by Helen Louise. The introduction is followed by another page headed ‘Training the Eye to See’. Underneath is a citation which throws a side-light on the problems encountered by the decipherer of the Bacon Bi-literal Cipher with an untrained eye when attempting to identify the minute subtle differences of things:

The reason that the different characteristics of tracks are not observed by the untrained eye is not because they are so very small as to be invisible, but because they are-to that eye-so inconspicuous as to escape notice. In the same way the townsman will stare straight at a grouse in the heather, or a trout poised above the gravel in the brook, and will not see them; not because they are too small, but because he does not know what they look like in those positions. He does not know, in fact, what he is looking for, and a magnifying glass would in no wise help him. To the man who does not know what to look for, the lens may be a hindrance, because it alters the proportions to which his mind is accustomed, and still more because its field is too limited.²¹⁴

The first part of the work is divided into sixteen lessons or different examples of how the Bacon Bi-literal Cipher can be used in various ways to conceal a message. Each lesson is accompanied by an explanatory paragraph explaining the method used in the example. The first lesson teaches the code or key by colour coding the twenty four letters of the Elizabethan alphabet with the bi-literal cipher placed alongside coloured circles. The lessons gradually become progressively more difficult with the use of coloured squares, lines and sticks, used to represent the *a* and *b* form. Lesson VI is a symbolic cipher in the form of hens and chicks representing the *a* and *b* forms to conceal the word egg. Lessons XI-XIV uses red and blue circles in forming numbers or words to conceal a cipher message. Using the red and blue circles to conceal one message Lesson XIV also shows how more than one cipher can be concealed in any form or image revealing the hidden name of Sir Francis Bacon.²¹⁵

In the appendix Helen Ricketts relates 'The Story of the Alphabet' by tracing back the beginning of the alphabet and writing in its earliest form. The Egyptians instead of using letters as we know them today used pictures or hieroglyphics to convey a message or tell a story. This picture style of communication albeit in a simpler form was transported by the Phoenicians to Greece where it continued to evolve. From these signs the inventive Greeks began constructing an alphabet Alpha, Beta etc. and introduced their new alphabet to the Romans. The grateful Romans adopted the Greek alphabet and over time changed and simplified it. In the middle ages the learned scribes of Italy used the Roman form of writing whereas other European states used a more elaborate style of lettering for their alphabets. After Gutenberg invented the printing press different forms of type were used in the printing of books. In Germany they used Gothic lettering a style of lettering used by Gutenberg in his first printed book. The Italians however favoured what we know today as the Roman print a more simple style of lettering based upon the style of lettering used in their writing before the advent of print. Out of the ensuing controversial debate on the merits of each type an Italian named Manutius introduced a new style of lettering called Italic. The three print types were subsequently used by printers throughout Europe and were used to varying degrees by various different printers in the works of the Elizabethan period and beyond. Each of these print types if required can be very slightly varied in size. So minutely in fact, that the slight variations are not visible to the naked untrained eye.²¹⁶ Ricketts provides ten plates to illustrate the construction of letters and the slight differences in some letter type used by some of the early printers. Plate IX shows two alphabets produced by the Spanish artist Francisco Lucas. The upper plate shows two different letter forms in which the large capital letters are easily differentiated from the smaller type lettering. In the lower plate there can be seen two examples of each letter wherein the differences in the small letters are so very slight they require close examination to differentiate them. By using the very slight differences in type Bacon was able to employ his bi-literal cipher to conceal secret messages in the pages of

Elizabethan works, including his Shakespeare plays. The last and tenth plate ‘The Bi-Formed Alphabet Classifier For Use with the Lucas Alphabets, 1577’ is signed in the bottom right hand corner by William F. Friedman.²¹⁷

The fourteen page pamphlet *The Greatest Work of Sir Francis Bacon* published by the Riverbank Laboratories written by J. A. Powell is of a great deal of interest. This work gives rise to a series of subtle deceptions perpetrated by the Friedmans designed to withhold important information about its author and his undoubted expertise in the area of codes and ciphers in general and the Baconian Bi-literal Cipher in particular. The Friedmans were very familiar with J. A. Powell from their days at Riverbank and in *The Shakespearean Ciphers Examined* they twice quote from the above work but only once mention his name in the text as follows ‘J. A. Powell says of this stage’.²¹⁸ The same quote used in the book is also found in their manuscript on which it is based ‘The Cryptologist Looks at Shakespeare’:

As one observer remarked, the cipher “came with the same effect as does a bright light to one who has lost his way in the dark night.” [Powell, J. A. *The greatest work of Sir Francis Bacon*. Geneva Illinois: The Riverbank Laboratories, 1916, pp. 14]²¹⁹

In an unpublished manuscript of a lecture given by W. F. Friedman ‘A Cryptographer Looks at Literature’, he artfully employs a deceitful rhetorical device beloved by the fraudulent Friedmans, ‘To be perfectly fair’, when just about to consciously withhold information and deliberately deceive and mislead his listening audience:

To be perfectly fair, I must quote what one of Mrs. Gallup’s defenders (Powell, 1916), say on this point of the difficulty in classifying the letters.²²⁰

So why did the Friedmans in three of their published and unpublished writings want to withhold information concerning J. A. Powell, an individual about whom of course they knew their ordinary readers would have no idea who he was, or anything of his background, experience and expertise, in the art and science of codes and ciphers?

He was the former director of the University of Chicago Press. During his time at Riverbank, Powell worked very closely with Mr and Mrs Friedman and in order to increase their knowledge of military ciphers Captain Powell and Mr Friedman were sent by Fabyan to the Army Service School at Fort Leavenworth to attend the course in military cryptography given by Lieutenant Joseph O. Mauborgne.²²¹

In 1914 Lieutenant Mauborgne achieved the first known solution of the Playfair cipher then used by British Intelligence as a field cipher. At the time the cipher was widely regarded as unsolvable. He described its solution in a nineteen page pamphlet entitled *An Advanced Problem in Cryptography and its Solution* issued in 1914 by Leavenworth Press at Fort Leavenworth.²²² The document was the first publication on cryptology issued by the United States government. He also wrote the small six page pamphlet *Data for the solution of German ciphers, also a diagram of cipher analysis* published in 1917 by Leavenworth Press at Fort Leavenworth.²²³ In his bibliography Professor Galland states ‘The diagram is reproduced from one originally prepared by William F. Friedman, while at the Riverbank Laboratories.’²²⁴ In the first World War Mauborgne introduced the only theoretically unbreakable cipher usually known as a one-time pad cipher which due to its practical difficulties was not suitable for military use in the field and promoted the first automatic cipher machine with which the so-called unbreakable cipher was associated.²²⁵ He later became head of the Signal Corps

PLATE X

THE BI-FORMED ALPHABET CLASSIFIER

For Use with the Lucas Alphabets, 1577

A B C D E F G H I K L M N O P Q R S T U V W X Y Z &

A B C D E F G H I K L M N O P Q R S T V W X Y Z &

a b c d e f g h i k l m n o p q r s s t u v w x y z

a b c d e f g h i k l m n o p q r s s t u v w x y z

a forms above the shaded parts, *b* forms below

CUT OUT SHADED PART WITH SHARP KNIFE

COPYRIGHTED, 1916, GEORGE FABYAN

TRANSCRIPTION

Havem oreth antho ushow estSp eakle sstha nthou knowe

a a a a a

A

stLen dless thant houow estLe arnmo retha nthou trowe

stSet lesst hanth outhr owest Shake spear e

Fig. 37 Plate X 'For Use with the Lucas Alphabets, 1577' from *Ciphers For the Little Folks* (Riverbank Laboratories, 1916) signed by William F. Friedman

and established the Signal Intelligence Service headed by William F. Friedman and served as the Chief Signal Officer until his retirement.

The course on military cryptography by Lieutenant Mauborgne at Leavenworth was aside from his own work mainly based on the *Manual for the Solution of Military Ciphers* (1916) by Parker Hitt, a Lieutenant Colonel of the Signal Corps in the U. S. Army.²²⁶ The 101 page work by Lieutenant Colonel Parker Hitt who was writes Kahn 'the towering figure of American cryptology in those days',²²⁷ was the first *book* on the general principles of cryptanalysis to appear in the United States. The manual was used as a textbook to train future cryptanalysts of the American Expeditionary Forces carried out at the Army War College in Washington under the secret auspices of MI-8 (Code and Cipher) of the Military Intelligence Division, the first official cipher bureau set up by the United States government, headed by Herbert O. Yardley and the special army training courses provided for US intelligence by the Riverbank Cipher Department delivered by Friedman, at the time the various Riverbank publications on the Bacon Bi-literal Cipher were being prepared and published.²²⁸ In 1917 Hitt was assigned to the staff of General Pershing in France as assistant to the Chief Signal Officer and when the A. E. F.'s 1st army was formed Hitt was made its first Chief Signal Officer.

During his time at Fort Leavenworth Captain J. A. Powell made a good impression on Lieutenant Mauborgne and his military superiors. After leaving Riverbank in December 1917 in the early part of 1918 Powell was ordered abroad to liaise with the British and French intelligence in all matters pertaining to the work of MI-8. He was instructed to learn all he could from the British and French about their cryptanalytic methods and what knowledge they possessed of enemy ciphers and codes. He sent a detailed report in February 1918 to the Chief of the Second Section, General Staff (colonel D. E. Nolan later head of US Military Intelligence) who wrote a letter on that date to Colonel Van Deman, head of US Military Intelligence, in Washington about his meeting with Captain Powell:

After conference with Captain Powell, I am satisfied that much good would result from a close liaison between the cipher section now being developed in your office and that at these headquarters. Captain Powell has looked over the situation, seen the general system of work of both the British and French, and has a clear understanding of the needs of our cipher section. One of these needs to which I wish to call special attention is that of mutual co-operation between all offices engaged in cipher work. We have arranged for keeping in touch with the British and French, but feel that much can be done in your office to better advantage than anywhere else.

A large cipher section in Washington could be made very valuable. You can employ code and cipher experts who, for one reason or another, are unable to come to France. Modern radio telegraphy will enable you to intercept many of the Continental code and cipher messages and thus have them while fresh. Our stations here will also copy many of these messages and send them to you by mail. We will also send you notes as to any solutions found or suspected as probable here, and, in addition suggestions from the French and British cipher offices. If you, for your part, would send suggestions as to kind of code or cipher and any solutions discovered by your office, we will distribute them to the French and British, and make use of them in our own office.

The British have a big cipher office in London, and another at their headquarters in France. The French have perhaps the biggest cipher office of all, in Paris. We are slowly developing such an office of our own. If to these four could be added a really big and efficient office in Washington, it seems to me we should soon be handling practically all the diplomatic and special codes and ciphers. These are all regarded as of great importance to us, and I cannot

too strongly urge your most cordial support with all the facilities and men you are able to procure.²²⁹

A world-class expert on codes and ciphers Captain Powell liaised closely with British and French intelligence and their cipher departments and sent back to Washington a voluminous report ‘composed almost wholly of material on cryptanalytic work’. His top secret endeavours successfully established the vital ground work for co-operation between the allies afterwards built upon by the first director of MI-8 Herbert Yardley during and after the war.²³⁰ It was this information about Captain J. A. Powell and his experience and expertise working with the French and the British military intelligence cryptanalytic departments for US intelligence that the fraudulent Friedmans did not wish to impart to their readers simply because someone of his undoubted expertise on ciphers and cryptanalysis had supported and endorsed the work of Mrs Gallup and her investigations into the Bacon Bi-literal Cipher.

Previous to this Captain Powell had been commissioned by Fabyan to examine the work of Gallup and the Riverbank Cipher Department on the Bacon Bi-literal Cipher. Following his investigations his findings were published in *The Greatest Work of Sir Francis Bacon*. The name of its author written ‘J.A. Powell’ appears on the title page of the pamphlet. It commences with an introduction headed ‘The Great Work: Its Discovery’ in which Captain Powell states it is ‘To Elizabeth Wells Gallup, a deeply read student of English literature, to whom belongs the enduring credit of discovering the existence and the solution of the Baconian Biliteral Cipher’:²³¹ She first searched for the Baconian Bi-literal Cipher in the Shakespeare First Folio:

With the principle in mind that the cipher would be found in *italic* type, if at all, she turned to an original copy of the 1623 Folio edition of Shakespeare. The page containing the “Prologue” to the play *Troilus and Cressida*, and the page containing the “Digges Poem” and the “I. M. Poem” forced themselves on her notice as being wholly in *italic* type (unlike most others in the volume). Further examination showed that the “Prologue” page was printed in type, some of the letters of which were obviously in two different forms. In the light of the principles she had laid down for her guidance, this page seemed to hold promising possibilities, and accordingly the “Prologue” was determined upon as the first point of attack. The wonderful instinct which, though ever held in check by rigidly scientific principles, had characterised Mrs. Gallup’s work throughout, had again led her to take the right step at this critical juncture, as later events proved.²³²

He describes the difficulties overcome by Mrs Gallup in her discovery of the bi-literal cipher and the methods of classification required for its decipherment. This had been made all the more difficult because in order to conceal his bi-literal cipher Bacon had used type where the minute differences were only made manifest upon careful and painstaking examination:

It may not be amiss to add a word of comment at this point. It should be clear that in order *to conceal* a cipher message in a printed page by means of the use of two forms of type, the letters of each form must necessarily have such a close *superficial* resemblance to each other as to deceive the eye of the casual and uninformed reader, else the very object of the cipher-concealment-would obviously be defeated. If the differences were apparent to the naked eye on a casual examination, it would be an easy matter for readers familiar with Bacon’s contemporary work, in which he had promulgated both the principles and the key of the cipher, to apply the latter in deciphering the concealed message. The necessity then for the use of two forms of type, whose differences were minute, and not apparent to the casual observer, should be clear without further argument.²³³

The pamphlet contains a demonstration of the application of the decipherment of the Prologue to *Troilus and Cressida* in the 1623 edition of the Shakespeare Folio. As known to those familiar with the First Folio the page is printed in italic type. Using ‘rigidly scientific principles’ Gallup proceeded to examine the page and classify the *a* and *b* form to reveal a deciphered message. The decipherment is set out letter by letter by Captain Powell in the Appendix. In addition to the plate showing the decipherment of the prologue to *Troilus and Cressida* Captain Powell provides further commentary to instruct and set out stage by stage the process of decipherment.

It is not exaggerating to assert that many days of labor were required to formulate the “alphabets” of the *a* and *b* form of each letter employed in the “Prologue” page. Frequently a letter would be assigned during the examination to the *a* or to the *b* form only to find that such assignment resulted in a combination which was meaningless, when the group of five to which it belonged was compared with the key. Further examination and comparison were then of course necessitated, and a redefinition of characteristics of the respective forms followed.

One by one the difficulties-sometimes apparently almost insurmountable obstacles-were overcome; order came out of chaos, principles of form, discoverable in each letter, were found-and the long hoped-for, laboriously sought-for treasure finally showed itself to the delighted eyes of this patient prospector.

With each letter classified as to its *a* or its *b* form, the procedure of deciphering was a simple step forward. Under each letter of the original text was written the *a* or the *b* designating the form to which it belonged, and the whole was then divided off into groups of five, each such group of *a*’s and *b*’s representing one letter as shown in Bacon’s cipher key.²³⁴

The three above Riverbank publications on the Bacon Bi-literal Cipher all carry the names of their authors: *Jerry and the Bacon Puppy* by Mildred Fitz-Hugh; *Ciphers for the Little Folks A Method of Teaching the Greatest Work of Sir Francis Bacon* by Dorothy Cain and Helen Louise Rickets; *The Greatest Work of Sir Francis Bacon* by Captain J. A. Powell, who worked for US Military Intelligence (MI-8) as a liaison officer with British and French Intelligence on codes and ciphers. In addition to these, there were three other Riverbank publications on the Bacon Bi-literal Cipher issued *anonymously* at the time William F. Friedman and Elizebeth S. Friedman headed the Riverbank Cipher Department, the keepers of its secrets. As we have seen the only authors of other anonymous publications on the subject of the cryptanalysis of codes and ciphers at Riverbank were William and Elizebeth Friedman.

During their time spent at Riverbank William Friedman anonymously wrote eight publications dealing with cryptography and cryptanalysis. The technical monographs which established his reputation known as Riverbank Publications nos. 15-22 were all authored by Friedman, with no. 19 co-authored with Lenox R. Lohr, and no. 21 with Elizebeth Friedman, with their copyright claimed by Fabyan. Although more recent evidence now appears to indicate that Elizebeth Friedman played a much larger role in their authorship:

The eight Riverbank Publications are commonly attributed to William alone, with two exceptions. Inside his personal copy of one paper, Riverbank No. 21 *Methods for the Reconstruction of Primary Alphabets*, William wrote in black ink beneath the title, “By Elizebeth S. Friedman and William F. Friedman.” A second paper, *Methods for the Solution of running Key Ciphers*, never included her name, but she and William always told colleagues it was a joint effort.

However, there’s evidence that Elizebeth was involved with more than just the two papers. The original typewritten and hand-edited drafts of the Riverbank Publications are now held

by the manuscript division of the New York Public Library, and her handwriting is all over them. William seems to have written a lot of the technical sections, with the drafts marked up by both of them, Elizebeth's comments interspersed with his, while Elizebeth wrote and researched the historical sections, which he edited in a similar fashion.

They worked as a team in most matters and the soon-to-be legendary papers were no different. In a 1918 letter to Elizebeth, William referred to the early Riverbank Publications as "our pamphlets"-*our*, not *my*.²³⁵

In the recent *The Women All Spies Fear Code Breaker Elizebeth Smith Friedman and Her Hidden Life* (2021) its author Amy Butler Greenfield lamented 'Even now, it's hard to tell exactly who wrote what':

Eventually, William was credited as their sole creator. Later, Elizebeth was named as co-author on one of them. Yet drafts and further records indicate that Elizebeth helped with at least two other pamphlets. Given that she tended to keep quiet about her achievements, she may have worked on others, too. On government forms, she noted at least twice that she was "co-author with William F. Friedman of numerous cipher books," by which she meant the pamphlets.²³⁶

It took a long struggle with Colonel Fabyan who financed all the above cipher works for William F. Friedman and Elizebeth S. Friedman to eventually win the battle with him over the copyrights of these Riverbank publications. There was also the matter of three other anonymous Riverbank Publications on the Bacon Bi-literal Cipher which like the above Riverbank Publications written by William F. Friedman and Elizebeth S. Friedman also carried on their inside page 'Copyright, 1916 GEORGE FABYAN', whose copyright remains unclaimed by their secret concealed anonymous authors, which the Friedmans for some reason scarcely mentioned in their *The Shakespearean Ciphers Examined* and their unpublished *The Cryptologist Looks at Shakespeare* on which it was based housed at the Folger Shakespeare Library. When they did mention these Riverbank Publications on the Bacon Bi-literal Cipher in both their manuscript and book the information provided was incomplete and inaccurate as well as deficient in several key important points of detail because they very deliberately, dishonestly, and fraudulently, systematically suppressed it. What were the fraudulent Friedmans trying to hide? What was it they kept secret from Baconian and Shakespeare scholars and the rest of the world for the rest of their lives. What was this enormous secret? An explosive secret of such magnitude that if known would cause an earthquake throughout the whole Shakespeare world and completely collapse the illusion that William Shakspere wrote the Shakespeare poem and plays and that in fact there are Baconian ciphers present in the Shakespeare works confirming his secret authorship?

About their time at Riverbank which is still shrouded in secrecy and mystery the Friedmans told lies all their lives, lies about small things, and much more importantly massive lies about things of the greatest importance to Baconian and Shakespearean scholarship, and in the end, they progressively lied about it, as they breathed.

Many years later after William Friedman had died (1891-1969) three years before her own death Elizabeth Friedman (1893-1980) was visited by a representative of the National Security Agency (NSA) the most secret arm of US Intelligence at her house in Washington DC. Her biographer Fagone recounts some of this revealing interview. The presence of the NSA historian who had come to ask Elizebeth about her time at Riverbank immediately made her nervous and clearly put her on edge, because as always, she had to keep her wits about her: what to say, what not to say, what to omit and what to lie about:

The NSA woman had a tape recorder and a list of questions. Elizebeth suddenly craved a cigarette.

It had been several days since she smoked.

“Do you want a cigarette, by the way?” Elizebeth asked her guest, then realised she was all out.

“No, do you smoke?”

Elizebeth was embarrassed. “No, no!! Then she admitted that she did smoke and just didn’t want a cigarette badly enough to leave the apartment [THIS WAS THE FIRST LIE]...

...The agency was documenting Elizebeth’s responses for its classified history files. The interviewer, an NSA linguist named Virginia Valaki, wanted to know about certain events in the development of American codebreaking and intelligence, particularly in the early days, before the NSA and the CIA existed, and the FBI was a mere embryo....

Her recall was impressive. Only one or two questions gave her trouble [SELECTIVE RECALL]. Other things she remembered perfectly but couldn’t explain because the events remained mysterious in her own mind “Nobody would believe it unless you had been there,” she said, and laughed.

The interviewer returned again and again to the topic of Riverbank Laboratories, a bizarre institution now abandoned, a place that helped create the modern NSA but which the NSA knew little about...Valaki wanted to know: What in the world happened at Riverbank?...“I’d be grateful for any information you can give me on Riverbank,” Valaki said. “You see, I don’t know enough to...even ask the first questions.”

Over the course of several hours, Valaki kept pushing Elizebeth to peel back the layers of various Riverbank discoveries...The analyst asked about one particular scientific leap six different times; the old woman gave six slightly different answers, some meandering, some brief, including one that is written in the NSA manuscript as “Hah! ((Laughs.))” [A SERIES OF DECEITS AND SUPPRESSIONS].²³⁷

“We lived hard and fast,” Elizebeth later recalled to the NSA’s Valaki, then paused, embarrassed. No, she did not mean to imply anything salacious. “I mean, there was absolutely no carousing, no parties, no nothing” [ANOTHER LIE].²³⁸

[It [Riverbank] was like being stationed in paradise. Fabyan provided students with daily box lunches with fresh food from the farm, organized outings, into the countryside, and threw parties where the single men could mingle with local girls, including a lavish military ball that ushered the golden-haired daughters of Geneva into the arms of the uniformed officers.]²³⁹

[The Grill was also the scene of frequent employee parties. Jack “The Sailor” Wilhemson furnished the music for the dancing on his accordion and many ethnic dances are remembered including Scottish and Irish jigs. Mrs. LeVerte remembers another party held on the river..]²⁴⁰

Not only was the NSA linguist Virginia Valaki apparently not in a position to ask the first questions about Riverbank, but more specifically, and more importantly, she was not in a position to ask the well-practiced liar and dissembler Elizebeth S. Friedman who was the concealed secret author(s) of three anonymous Riverbank Publications on Bacon’s Bi-literal Cipher. Whose identity Elizabeth S. Friedman and her husband William F. Friedman, of course knew, and spent their lives avoiding and suppressing. Now why would that be?

In their book *The Shakespearean Ciphers Examined* the fraudulent Friedmans state that the bi-literal cipher was never used or inserted by Bacon in the Shakespeare plays or in his own acknowledged works,²⁴¹ which was very different to what was stated by those secret and concealed authors of the three anonymous works of the Riverbank Publications on the Bacon Bi-literal Ciphers. Whom the Friedmans knew well, very well; better than anyone, effectively, at the same level as knowing themselves, a truth

they concealed and lied about to everyone else, except themselves, a secret known to them and one which defined them, which they could never and were never going to reveal to the rest of the world.

Let us begin with the anonymous *The First Twelve Lessons in the Fundamental Principles of the Baconian Ciphers and Application of Books of the sixteenth And Seventeenth Centuries*. Printed on its title page is ‘Compiled by George Fabyan and rather than the regular imprint (‘Riverbank Laboratories, Geneva, Illinois’) it reads ‘Copyright 1916 By George Fabyan’, possibly indicating it was not actually published. The pamphlet comprises a total of 14 pages. The foreword serves as an introduction to the story of Gallup’s discovery of the Bacon Bi-literal Cipher and how she applied the method of decipherment to the prologue of *Troilus and Cressida* in the 1623 Shakespeare First Folio and numerous other 16th and 17th century works:

In certain volumes published in the 16th and 17th centuries, the use and commixture, without any apparent reason, of two forms of type, both in the roman and the italic letters, has long been a matter of comment and discussion among lovers of books and book lore, and although various theories have been advanced by researchers and students of Elizabethan literature, none of them have seemed to offer a solution of the problem.

Twenty years ago, Elizabeth Wells Gallup, an instructor in English, was reading an original of Sir Francis Bacon’s *De Augmentis Scientiarum* and the chapter on Ciphers appealed strongly to her reason. Of the books of the Elizabethan period, none are of greater importance than the 1623 Shakespeare Folio, which contains a vast number of examples of the use of two forms of type. She asked herself whether there might not be concealed within this work a cipher used as Bacon described.

Bacon explains in the above mentioned chapter how a secret or interior note may be infolded within an apparently simple open or exterior message by the use of two forms of type very similar in appearance but still showing to the closely observant or experienced eye distinct characteristics, by means of which these two forms may be distinguished. Bacon calls attention to the mathematical fact that the transposition of only two different objects (blocks, letters, etc.) arranged in groups of five, will yield thirty-two dissimilar combinations, of which only twenty-four would be necessary to represent all the letters of our alphabet (I and J, U and V, being used interchangeably in the 16th century)....

Having mastered the examples given by Lord Bacon in both the editions of *De Augmentis Scientiarum* or “The Advancement of Learning,” Mrs. Gallup determined to apply the principles of Bacon’s Biliteral Cipher to the 1623 Shakespeare Folio. Opening the Folio at random she turned the leaves to select the page of the most characteristic italic type she could find, and chose the page containing the Prologue to “Troilus and Cressida”, in which even a casual inspection will disclose the presence of two forms of type for certain letters. (Note such outstanding examples as the capital *I*’s, the capital *N*’s, the capital *T*’s and the small *w*’s.) Having noticed the undoubted presence of two forms of type, Mrs. Gallup’s first step in endeavoring to determine whether this page does or does not contain the Biliteral Cipher, was to study the differences between these two forms; her next step was to decide which was to be termed the *a*-form and which the *b*-form. The fact that in Bacon’s code the *a*’s predominate over the *b*’s, suggested to Mrs. Gallup that the *a*-form might probably be that occurring more frequently on the printed page, *if the code given by Bacon had actually been used*. Examining each letter under a magnifying glass, she tentatively assigned each one as an *a* or *b* form, marking it accordingly. Having completed the marking in this manner, she applied Bacon’s own code but without any intelligible result. She noticed, however, near the bottom of the page, that the groups of *a* and *b* resulted in giving by application of the Code a collection of letters as follows:

ELIZxBExH

She realized that this combination of letters was probably intended to spell out the word “Elizabeth.” She changed carefully the markings of the groups which formed the letters here designated by *x*, making, as she did so, sketches of the characteristics and differences of the letters she so changed in producing the word “Elizabeth.” Then with this additional information, Mrs. Gallup carefully marked each letter of the Prologue anew-to find to her own amazement, when she had finished, the astounding message which the student will himself have the pleasure of deciphering in a succeeding lesson. After the Prologue, she studied and deciphered other passages concealed in the apparently meaningless type forms. Later she applied the methods to a number of 16th and 17th century works, with negative results in certain cases, but positive results in others.

Such, then, is the history of the discovery of the use in certain aforementioned volumes of a cryptic or secret writing, which for three hundred years escaped detection-The Biliteral Cipher of Sir Francis Bacon.²⁴²

The foreword is followed by a series of detailed instructions for the study of Bacon’s Bi-literal Cipher as found in his *Advancement of Learning* (1605) and later expanded upon in the Latin *De Augmentis Scientiarum* (1623) published shortly before the First Folio of the Shakespeare works and from Spedding’s edition of Bacon’s *Works*. It is set out in a manner similar to how William Friedman presented much the same in ‘The earliest attempts at cryptography, from the invention of the art of writing to Bacon’s “Bi-literarie” cipher’, and the Friedmans presented in their manuscript *The Cryptologist Looks at Shakespeare* and subsequent book *The Shakespearean Ciphers Examined*.

The more methodized *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* issued anonymously also carries on its inside page ‘Copyright, 1916 GEORGE FABYAN’. The fifteen page pamphlet begins by stating its clear objective in the kind of language and methodical approach one would expect from William Friedman with its emphasis on the mindset and scientific implements required for the systematic task at hand:

The purpose of the following pages is to show as clearly as may be the method to be pursued by the student in deciphering or translating the Biliteral Cipher. The first requisite is good eyes; the second, a careful and observant attitude of mind; the third, much devoted patience. (A good reading-glass, preferably oblong in shape, is a highly useful, indeed an almost indispensable adjunct.)²⁴³

In very familiar terms its author (s) then sets out the works that the student requires to familiarise themselves with the Bacon Bi-literal Cipher:

The first step to be taken is to acquire familiarity with Bacon’s description of the Biliteral Cipher as first explained by him in the 1623 edition of his *De Augmentis Scientiarum*, translated by Gilbert Wats in 1640 and by James Spedding in 1857: for his explanation there set forth and illustrated is the one and only basis of all use of the Biliteral Cipher, as that term is here employed. No departure from the directions he there gave is recognised or implied; nor is any essential idea or even explanation added to what he there set down. It is true that after about 1616 extra devices and complicating touches seem occasionally to have been introduced, as though to baffle the too confident decipherer and thus to make the cipher still more safely obscure; for in the *De Augmentis* Bacon specified, just before explaining the Biliteral Cipher, that two of the three “virtues required” in ciphers were “that they be, if possible, such as not to raise suspicion.”²⁴⁴

The pamphlet also contains general instructions for the study of the bi-literal cipher and includes several plates of italic and roman type letters to assist the student to

differentiate between the different types found in Elizabethan and Jacobean works. Additional plates reproduce Bacon's passage on ciphers in *Advancement of Learning* and the cipher passage found in Spedding's translation of *De Augmentis Scientiarum*. The same material is similarly presented by William Friedman in his lecture 'The earliest attempts at cryptography, from the invention of the art of writing to Bacon's "Bi-litarie" cipher':

One writer deserving special attention as a knowledgeable cryptologist in the seventeenth century, and one with whose cipher I'll close this lecture, is Sir Francis Bacon, who invented a very useful cipher and mentioned it for the first time in his *Advancement of Learning*, published in 1604 [sic] in London. The description is so brief that I doubt whether many persons understood what he was driving at. But Bacon described it in full detail, with examples, in his great book *De Augmentis Scientiarum*, which was published almost twenty years later, in 1623, and which first appeared in an English translation by Gilbert Wats under the title *The Advancement of Learning*...

In his *De Augmentis* Bacon briefly writes about ciphers in general and says that the virtues required in them are three: "that they be easy and not laborious to write; that they be safe, and impossible to be deciphered without the key; and lastly, that they be, if possible such as not to raise suspicion...."²⁴⁵

The *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* includes an explanation of the bi-literal alphabet and how he resorted to the use of two forms of type found in works of the period. It contains several plates reproduced from the 1640 edition by Gilbert Wats and from the Spedding edition, as well as providing plates illustrating the minute differences in italic and roman type. To explain how the Bacon Bi-literal Cipher works its author (s) gives the example found in the *De Augmentis* 'That the substance and meaning of the "external" message may be anything, quite regardless of the inner message-in a different language, indeed-is helpfully illustrated by Bacon, when he makes the external message "Do not go till I come" spell in cipher the message "Fly."²⁴⁶ The same example is again put to use by the Friedmans in *The Shakespearean Ciphers Examined*.²⁴⁷ On the opposite page in *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* its hidden author(s) reproduce a facsimile of Cicero's letter from the Gilbert Wats 1640 edition and the Friedmans reproduce the same from the Gilbert Wats 1640 edition in *The Shakespearean Ciphers Examined*.²⁴⁸ In *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* its author(s) explains 'This may easily be written in Latine: *Manere te volo donec venro*, and be so printed (or written) as to spell the hidden Latin message Fuge-or its English equivalent "Fly."²⁴⁹ Similarly in his lecture 'The earliest attempts at cryptography, from the invention of the art of writing to Bacon's "Bi-litarie" cipher' W. Friedman does the same 'for the example he used in case of the word *Fuge*...[is] enciphered within an external message "*Manere te volo donec veniam*"'.²⁵⁰ To illustrate the example more extensively says its author in *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* 'Bacon adds a longer example, in which he uses a 97-word extract from he terms Cicero's first epistle as the "external" message, and conceals within it the word message sent by means of a Scytale or round-ciphered staff, and commonly known as the Spartan message.'²⁵¹ The same example is used by William Friedman in his 'A Cryptographer Looks at Literature' and in his lecture 'The earliest attempts at cryptography, from the invention of the art of writing to Bacon's "Bi-litarie" cipher', and by the Friedmans in *The Shakespearean Ciphers Examined*.²⁵² In *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* its author(s) reproduce the illustrated 'Example of a Bi-formed Alphabet' from the

Gilbert Wats 1640 edition with the same reproduced by the Friedmans in *The Shakespearean Ciphers Examined*.²⁵³

Working closely with Mrs Gallup the author(s) of *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* explain the difficulties faced by the decipherer of the Bacon Bi-literal Cipher and the scientific methods introduced to overcome them:

The decipher soon learns that the shape of a letter is not always sufficient in itself to enable him to determine the form to which the letter belongs; nor is it always possible to judge a single letter apart from its neighbors. In the early efforts of Mrs. Elizabeth Wells Gallup, the pioneer student of this subject, it was sometimes necessary to pass over doubtful letters, leaving their assignment to either form to be accomplished later, by the assistance of the context. This plan, although legitimate, is, of course, unscientific, and too much open to adverse criticism to be satisfactory as anything more than a temporary expedient. It must be altogether eliminated from any permanent system of decipherment. There must be devised a method more incontestable which may be relied upon to carry us through the difficulties, and to explain the anomalies and apparent discrepancies as well.

It is believed that in the scientific use of the quadrant to measure the slope of the letters and their angles with the horizontal, a very near approach has been made to such a method. The principle is geometrical: "go by the line and level," and "act upon the square."²⁵⁴

The author(s) of *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* point out the range of complexities faced by the most ardent investigators when trying to unlock the Bacon Bi-literal Cipher and the secrets it conceals and reveals:

The only truly scientific and satisfactory method of studying the problem of deciphering the Biliteral Cipher is first, thoroughly to grasp the principles laid down by Bacon himself; then, when the early and simple books have been gone through, and the system has been thoroughly conquered up to that point, the student may be able to observe the anomalies, the discrepancies, and the stumbling-blocks cast in his way, and to perceive that the first simple instructions do not suffice for advanced works. He will observe strange marks introduced; fresh devices, apparently grafted on to the original stock. Such hints, signs, and landmarks are neither to be overlooked nor explained away; rather, by patient collation, and indefatigable note-taking, he must find out how to utilize these tiny pebbles dropped in the labyrinth as guides for him to follow.²⁵⁵

According to Mrs Gallup's decipherments from *Novum Organum* Bacon reveals that he had used six ciphers in some of his works: the Bi-literal Cipher, the Word Cipher, Capital Letter Cipher, Clock Cipher, the Symbol Cipher and Anagrammatic Cipher. In the *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon* its author (s) in reference to these six cipher systems prophesize that future generations will utilise them to bring forth more secrets about Bacon's life and writings:

We know that at least six kinds of ciphers have to be found out. Of these, so much is known about four or five as to leave little doubt that the next generation will be able to unravel their long concealed secrets.²⁵⁶

The anonymously issued *The Keys for Deciphering the Greatest Work of Sir Francis Bacon* is of a very different order to the previously published pamphlets. The book amounting to a total of a hundred pages is the result of an enormous amount of industry and expertise originating from the Riverbank Cipher Department headed by William F. Friedman and Elizebeth S. Friedman whose fingerprints are found all over it. *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* displays all the confirmatory tell-tale signs of the hallmarks and characteristics of a work written by

William Friedman-with the assistance of his wife Mrs Friedman-reflected in his and their later publications including *The Shakespearean Ciphers Examined*. The reason the Friedmans spent a lifetime concealing the identity of the author(s) of *The Keys for Deciphering the Greatest Work of Sir Francis Bacon* is because it categorically and emphatically states that the Bacon Bi-literal Cipher is demonstrably found in certain works published in the Elizabethan period which they afterwards categorically and repeatedly denied in *The Shakespearean Ciphers Examined* in knowingly perpetrating a massive fraud against Baconian and Shakespearean scholars all around the world that continues unchecked to the present day.

Its content, subject-matter, mental habits, syntax, language, turns of phrase, favourite words and expressions all undeniably and irrefutably point to and confirm the identity of its anonymous authors William F. Friedman and his wife Elizebeth S. Friedman. Its primary authorship by William Friedman is betrayed and exposed from its opening paragraph:

After several years of a minute study of the general subject of CIPHERS, especially such as appear in books published in the Elizabethan period, we have arrived at the following conclusions which are submitted with diffidence, but nevertheless with complete confidence:

(1) That ciphers of all kinds were in general use in the fifteenth, sixteenth and seventeenth centuries among those who laid claim to any degree of education and culture.

(2) That the Biliteral Cipher of Sir Francis Bacon as described in his *De Augmentis Scientiarum* is present in certain works published in the Elizabethan period, and that its presence is susceptible of demonstration to anyone with a mind trained to scholarly investigation, and with the ordinary powers of observation.

(3) That the preference for the italic type as a vehicle for the Biliteral Cipher was induced by the fact that various forms of the same letter could be made embodying minute differences, with less probability of detection than in the case of the roman or any other form of letter.²⁵⁷

Note the word ‘diffidence’ in the line: ‘we have arrived at the following conclusions which we submit with diffidence’:

The word ‘diffidence’ was a favourite of William F. Friedman’s which he again used with emphasis in one of his lectures discussing the Bacon Bi-literal Cipher:

If you’d like to learn more about this theory, I suggest with some diffidence that you read a book entitled *The Shakespearean Ciphers Examined*. I use the word *diffidence* [his italics] because my wife and I wrote the book, which was published in late 1957 by Cambridge University Press.²⁵⁸

The rest of the ‘Prefatory Note’ provides an overview and summary of the systematic scholarly and scientific methods employed in determining the presence of Bacon’s Bi-literal Cipher in Elizabethan and Jacobean literature including his acknowledged and pseudonymous writings, among them, his Shakespeare poems and plays:

The work thus far accomplished has necessitated the careful study of the origin, history, and construction of letters and alphabets of different nations, and this has not only shown that “the two forms of letters in one character,” or the so-called “doubles,” were in existence and in common use at that period, but also has led to the belief that three forms of one character-

all three forms so closely resembling each other as to be difficult to tell them apart-were in use for cipher purposes.

It has been impressed on the minds of those engaged in the work that France was the center of learning in the development and use of ciphers. Thus the most important works on ciphers are in French, followed by those in English, Latin, Spanish, and perhaps Italian, in the order named. The study of ciphers shows the same gradual improvement in methods and use that is found in the development of any other science. It seems to have reached its zenith in the early part of the seventeenth century, from which time on it declined rapidly.

We have every reason to believe that ciphers were used to record the learning of that period. Some of the best known and most important volumes were unquestionably resorted to for this purpose through connivance or otherwise.

Most of the work so far accomplished by Riverbank Laboratories has been confined to the cipher described by Sir Francis Bacon in his *Advancement of Learning* and called by him the "Biliteral Cipher," and which has been tested and dissected until now its presence in certain works is demonstrable beyond any doubt.

The statements, historical, literary, scientific, and linguistic, uncovered and extracted from the Biliteral Cipher have brought us face to face with questions far more important than is that of the Cipher itself. These have not been approached by Riverbank Laboratories because they naturally pertain to fields of study which should be approached in each case by specialists in the respective subjects.

If the use of the Biliteral Cipher in certain volumes of the Elizabethan period be conceded -and in the light of our studies this conclusion is inescapable-the following questions yet remain unanswered: (1) How was the use of two forms of type controlled for the purpose of the Cipher, and what was the origin of these "doubles" or the "two forms in one character"? (2) How much credibility is to be attached to the statements extracted from the deciphered material? In other words, what bearing can these deciphered messages be conceded to have on history, literature, science, and language?

These questions must be answered, if at all, by a wide variety of specialists in the several fields affected. They involve important questions concerning the designing and constructing of alphabets and type forms; the history of printing; English literature, especially of the Elizabethan period; the history of the Elizabethan and Jacobean periods; the broad field of physics. Furthermore, the ciphers lead the investigator to citations and translations from the classical authors in the authentication of which the specialist in Greek and Latin alone can speak with authority.

The fields of research thus opened up are of the widest possible extent. Our work of establishing the presence of the Cipher is but the first step in the approach toward large and important subjects. It is possible that much of the material deduced by means of the Biliteral Cipher can never be authenticated. Much of it is susceptible of verification, however, by means of proper research. The studies involved are so vast and so numerous that work on them should be co-ordinated by those best fitted to conduct them. With this conviction the co-operation of students is respectfully invited by

RIVERBANK LABORATORIES,
Geneva, Illinois.²⁵⁹

This impressive and masterly work consists of an extremely detailed and technical anatomy and analysis of the various elements of Bacon's Bi-literal Cipher. Following its prefatory note it sets out the text proper with 'The Keys To The Bi-literal Cipher':

For three hundred years the Biliteral Cipher devised by Sir Francis Bacon has securely locked away from human sight and access the important messages addressed by their author to posterity. Though the pages of works printed in the sixteenth and seventeenth centuries have been read and studied for their subject-matter by students of literature, of history, of political science, of art, of philosophy, *et id genus omne*, no one, until comparatively recently, combining the mind of the student with the eye of the typographer, seems to have thought to

go below the surface of these old productions of the printer's art, and extract from them the secrets that lay there, visible yet unseen, awaiting the advent of him "who, having eyes, sees."

Devised and made use of by its author for the express purpose of avoiding detection during his own lifetime, it has in spite of its simplicity-indeed, because of this very quality-eluded the superficial eye of the many as well as the insight of the few who, possessing the germ of the idea, yet lacked the understanding necessary for its correct development.

This is the more remarkable in view of the fact that the fullest possible explanation of the Biliteral Cipher, as well as of the key itself and the manner in which it is to be applied, was given by Bacon himself in the Sixth Book of his *Advancement of Learning* (see James Spedding's edition of Bacon's Works, 1857, pp. 444 ff.). He there shows at considerable length how two type forms, closely resembling each other yet differing in minute details not easily detected, may be utilized for printing a book, a story, a poem, or the like, while conveying a wholly different message to those possessing the key-or, as he himself describes it, a method of expressing *omnia per omnia*.

As its title implies, the present booklet serves to exhibit the keys by which the door to this new and unexplored storehouse may be opened. Laborious experiment and study have been resorted to in originating and developing the keys themselves, and in fitting them to the lock that has hitherto barred the way to a decipherment of what the Biliteral Cipher serves to conceal. By means of these keys-after all, merely the apparatus which the inventor of the Cipher intended should be used-the differences between the two forms of type in the printed pages of the original works may be definitely and conclusively established, and, as has been done in the case of the First Folio (1623) of Shakespeare, the assignment of either form of the letters to their respective class may be accomplished with certainty.

By means of the apparatus illustrated in these pages, examination of the letter-press may be assisted both by mental visualization, by ocular comparison, and by mechanical measurement and dissection of slants and curves. In other words, the physical equipment by means of which the Biliteral Cipher may be read is here presented. The mental equipment necessary-the study, the application, the development of the sense of observation-is no more than is demanded by the study of any science, and need not be commented on here.

For an illustration of the Cipher code and its application, together with a description of the steps which led to a solution of the problem of decipherment, the reader is referred to a booklet entitled "The Greatest Work of Sir Francis Bacon," etc., by J. A. Powell, to be obtained on application to Riverbank Laboratories. The student is advised to study the latter carefully before going fully into the details of the following pages. An explanation of the Biliteral Cipher-what it consists of and how it is applied-is to be found there. An understanding of the facts there explained is assumed for the purposes of this booklet.

We proceed here to a description of the "Keys."²⁶⁰

It explains in some detail the alphabets and classifiers found on the various plates and provides an explanation of the several alphabets pointing to the example used by Spedding of the two forms which allows the investigator to observe the differences with unerring accuracy before moving on to the original typefaces reproduced in the edition by Gilbert Wats. The source of every letter depicted in the several Alphabets is given, writes our author (s), in the "Index of Typical Letters", which reminds us of the title of William Friedman's ground-breaking work *The Index of Coincidence and Its Applications in Cryptography* (Riverbank Publication, No. 22).²⁶¹ Classifiers of the two forms of every size of type used for the letters of the poems by James Mabbe and Leonard Digges, for 'The Names of the Principal Actors', the Prologue to *Troilus and Cressida* and 'A Catalogue of the several Comedies, Histories and Tragedies' in the Shakespeare First Folio are reproduced in a series of illustrations. For the importance of true and false base lines in the determination of form its authors instructs the reader to consult *Hints to the Decipherer of The Greatest Work of Sir Francis Bacon*.²⁶²

Under the heading 'The Technique Employed' its author (with palpable self-regard) is at repeated pains to point out the role of the photographer and the miscellaneous scientific tools used in the preparation, observation and method in the preparation of the plates for the Alphabets and Classifiers:

The methods used in constructing the plates for the Alphabets and Classifiers were as exact as the most experienced photographers could attain, and this work may be duplicated at any time and place with the like care and skill. Rule, compass, level, and square were used throughout the work.

As a basis for the work of preparing the several materials represented here, the pages containing the "I. M." and the "Digges" Poems, "A Catalogue," "The Prologue," and "The Names of the Principall Actors" were photographed from the original copy of the First Folio (1623) in the possession of the Newberry Library, Chicago, Illinois. The photographs were made on 8x10 dry plates, reproducing the pages in sections enlarged 3 1/3 diameters. This method of direct enlargement of small sections (for example, the page "A Catalogue" required 14 separate 8x10 plates) made it possible to procure uniformly sharp negatives, for it was found impossible to photograph an entire page from an antiquated book and obtain the whole in a uniformly sharp focus, owing to the curling and wrinkling of the time-worn pages. The negatives and photographs were made by a professional photographer, and the following statement regarding the work can be made without any qualification whatsoever: *No negative has been retouched or manipulated in any way. The photographs are exact reproductions in every detail, including dirt spots, imperfections, etc.* ²⁶³

It is clear the author of *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* possesses a masterly grasp and understanding about all matters of photography and its technical methods and procedures. This is not surprising because the author of *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* and photographer of the plates contained within it, are one and the same, namely, William F. Friedman. *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* contains fourteen plates signed in the right hand bottom corner by 'W. Friedman.'²⁶⁴ In addition to this in a section headed 'The Templets' photographic type plates of 'Alphabet Templets' (with diagrams and illustrations) followed by 'Illustrated Description Of The Typical Letters In The "I. M." Poem' amounting to a total of more than a hundred and thirty are also almost certainly the handiwork of its author, William F. Friedman.²⁶⁵ The concluding part of *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* is assigned to an 'Index Of Typical Letters' applied to the prefatory material of the Shakespeare First Folio not unlike William F. Friedman's *The Index of Coincidence and Its Application in Cryptography* (Riverbank Publication, No. 22).²⁶⁶

Sometime after having researched and written out the above I inadvertently had my attention drawn to a recent publication entitled *The Sabines at Riverbank: Their Role in the Science of Architectural Acoustics* by John W. Kopec. The book issued in 1997 by the Acoustical Society of America was limited to only a 1,000 copies on a subject which almost inevitably falls outside the scope of literary scholarship and is one of the reasons it remains unknown to Baconian and Shakespearean scholars.

At its date of publication the author had spent nearly twenty-five years at Riverbank and held the position of curator of the Riverbank Museum. Among other interesting items the Riverbank museum holds artefacts and unique archives discovered in long-forgotten storage rooms at the Riverbank Laboratories.

In 1947 the management of the Riverbank Laboratories passed into the control of the Illinois Institute of Technology Research Institute (IITRI). From 1961 John W. Kopec (1936-2004) managed IITRI's Riverbank Acoustical Laboratories. His little

THE BI-FORMED ALPHABET CLASSIFIER
The "L. Digges" Poem, Original 1623 Folio

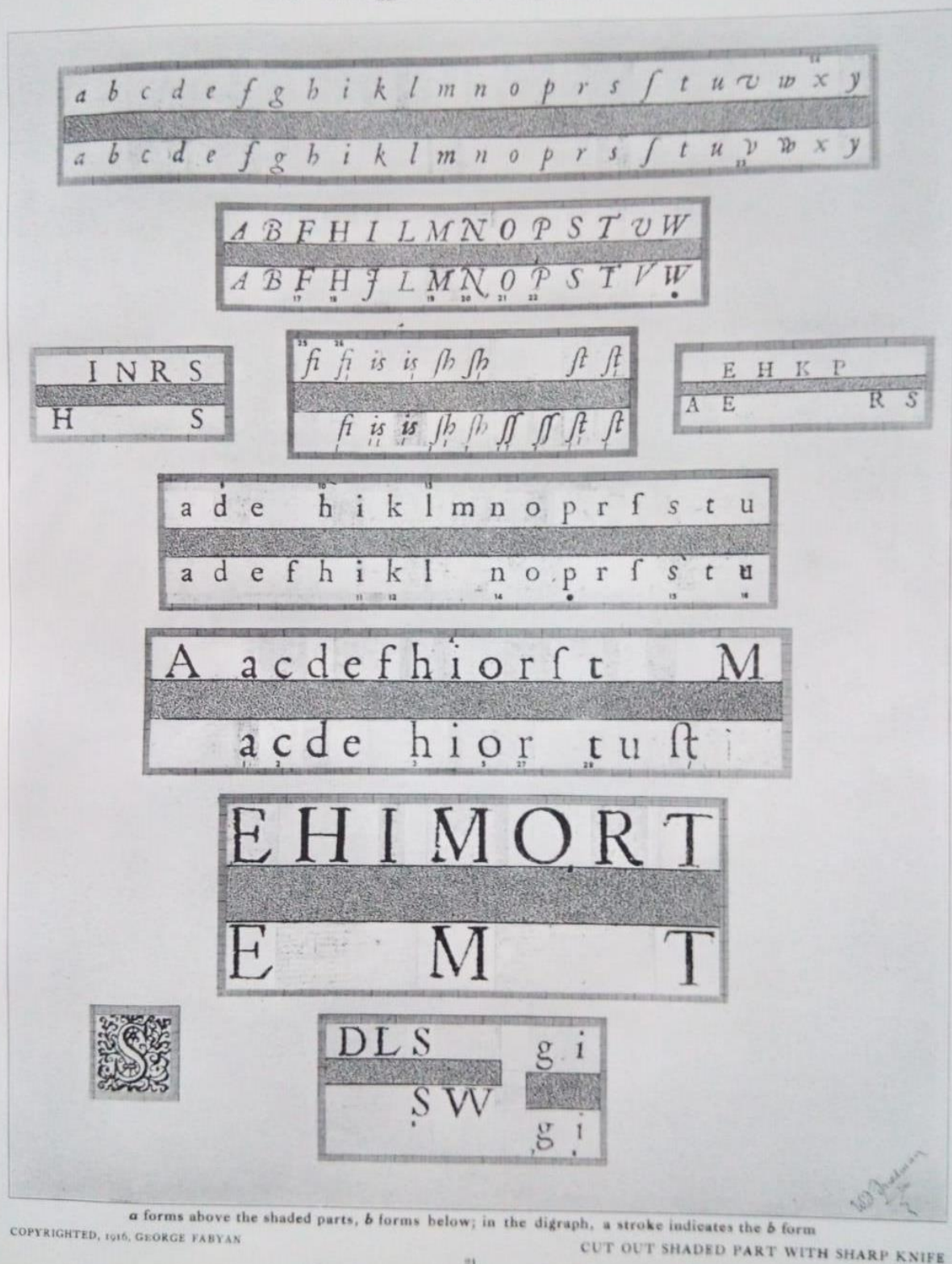


Fig. 38 Plate for the Bi-formed Alphabet Classifier for the Leonard Digges poem from the Shakespeare First Folio in *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* (Riverbank Laboratories, 1916), signed by William F. Friedman

THE BI-FORMED ALPHABET CLASSIFIER
 "A Catalogue," Original 1623 Folio

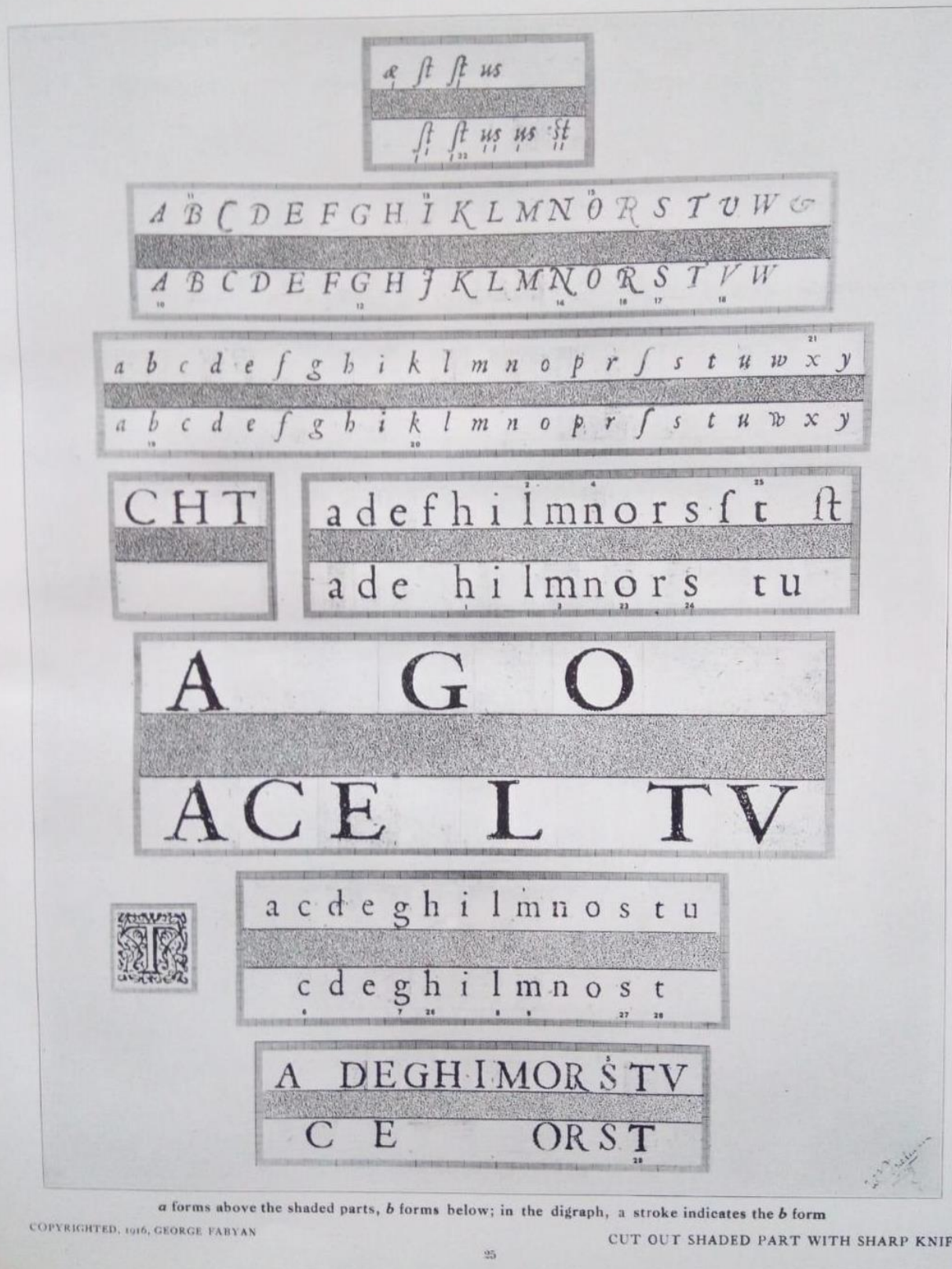
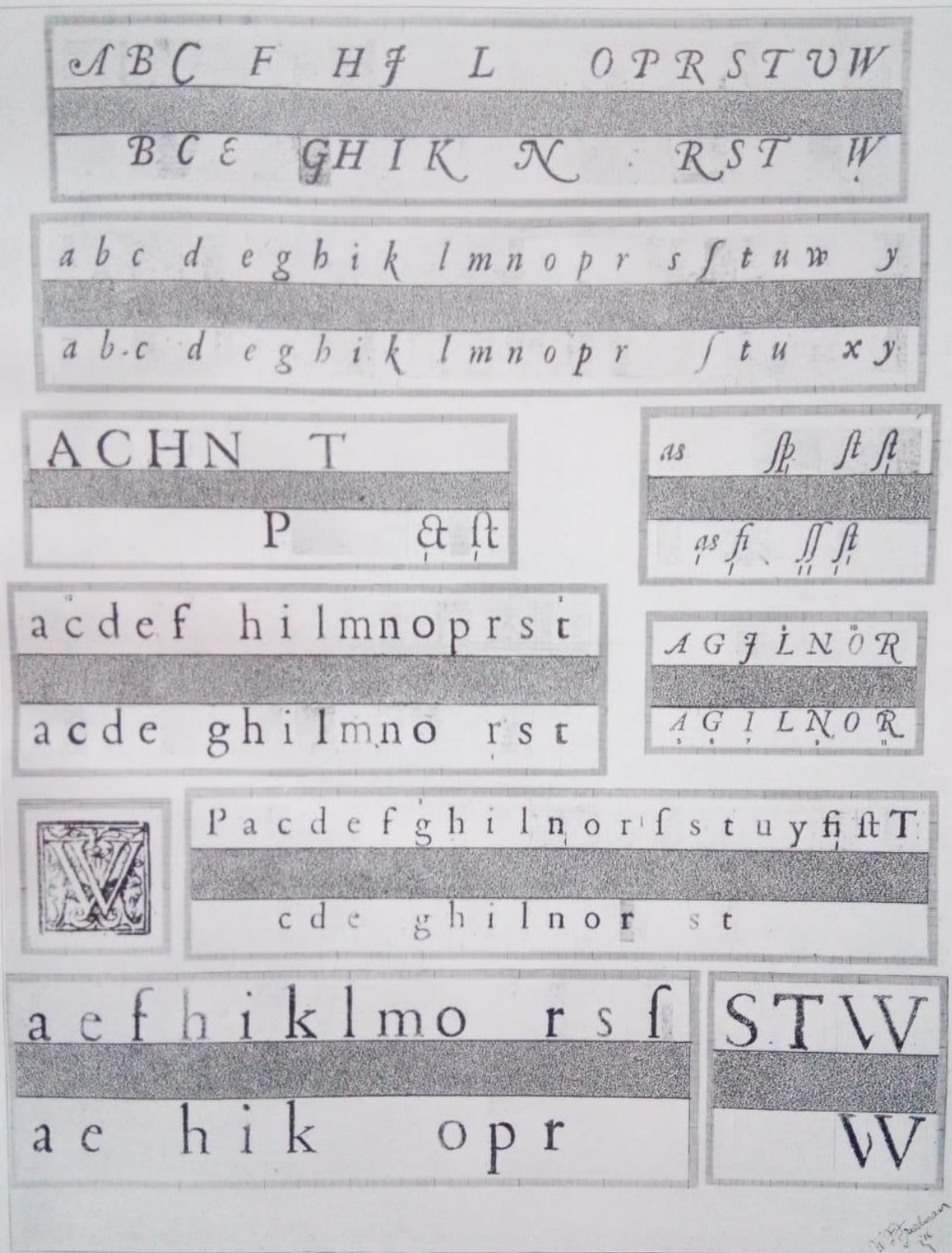


Fig. 39 Plate for the Bi-formed Alphabet Classifier for A Catalogue of the Several Comedies, Histories and Tragedies Actors from the Shakespeare First Folio in *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* (Riverbank Laboratories, 1916), signed by William F. Friedman

THE BI-FORMED ALPHABET CLASSIFIER
 "The Names of the Principall Actors," Original 1623 Folio



a forms above the shaded parts, b forms below; in the digraphs, a stroke indicates the b form

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CUT OUT SHADED PART WITH SHARP KNIFE

Fig. 40 Plate for the Bi-formed Alphabet Classifier for The Names of the Principal Actors from the Shakespeare First Folio in *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* (Riverbank Laboratories, 1916), signed by William F. Friedman

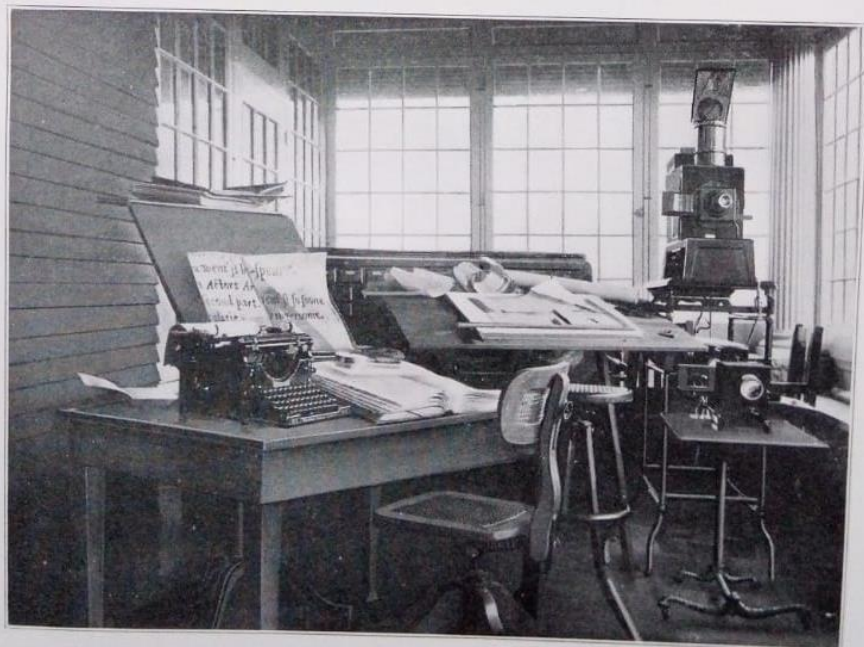
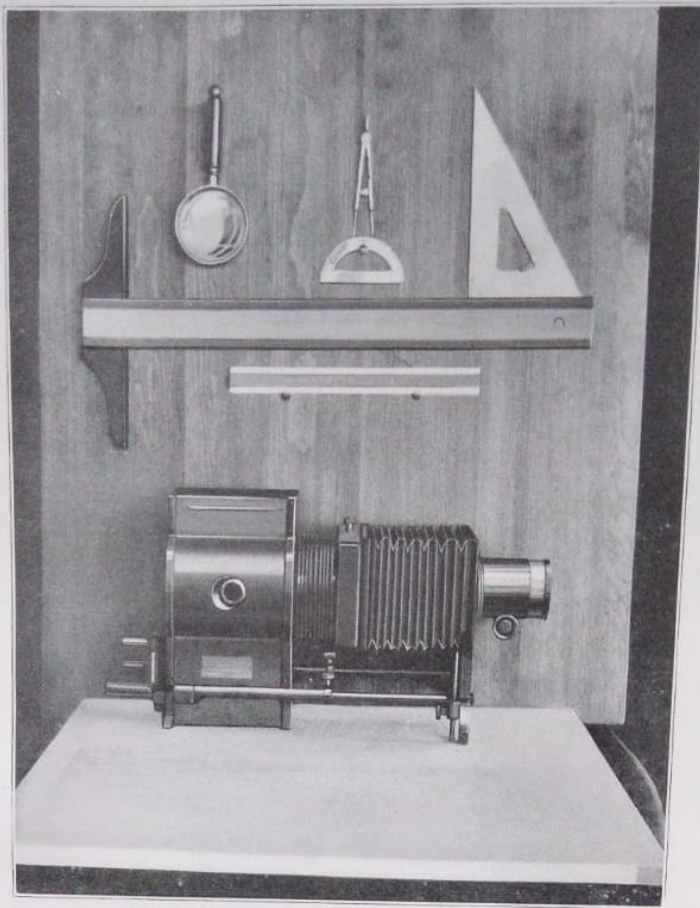


FIGURE 6.

Some of the Implements Used in Preparing the Keys

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Fig. 41 Illustration of the scientific and technological equipment for preparing the Classifiers and Alphabets in the Bacon Bi-literal Cipher in *The Keys for Deciphering The Greatest Work of Sir Francis Bacon* (Riverbank Laboratories, 1916), signed by William F. Friedman

known work *The Sabines at Riverbank: Their Role in the Science of Architectural Acoustics* traces the history of Riverbank from its beginning in the early 1900s and its founder Colonel Fabyan, his own relative Professor Wallace C. Sabine, the father of the science of architectural acoustics, as well as containing astonishing information about William and Elizebeth Friedman and the Riverbank publications on the Bacon Bi-literal Cipher.

In addition to his professional duties, Kopec fully immersed himself in the history of Riverbank, a history which has barely been glanced at. Virtually all of what little is known of the Riverbank Cipher Department has come down to us through the lens of the Friedmans. Their three main repositories (two unpublished) where they discussed their time at Riverbank provide us with only a very carefully edited version of the circumstances and events surrounding it and their parts played in the authorship of the Riverbank publications on the Bacon Bi-literal Cipher. Their various accounts about their time at Riverbank are marked by inconsistency, factual discrepancy, deliberate omissions, falsehoods and out and out mendacity. Now here for the very first time was a book on Riverbank by an author who had spent more than two decades on site with unlimited access to what records remained of its secret, obscure and hidden past. His book itself 'is dedicated to Don Williams',²⁶⁷ the son of Fabyan's chauffeur Bert Williams, who was driving the limousine that picked up Elizebeth Smith, as she was then, from the Newberry Library in Chicago, on that fateful day when her path crossed with Colonel Fabyan marking the start of her career at Riverbank from 1916 to 1920.²⁶⁸ Colonel Fabyan's long time chauffeur Bert Williams knew Elizebeth and her soon to be husband William F. Friedman well, and for the years the Friedmans were at Riverbank Bert Williams would have been in almost daily contact with them, as he would have been with Elizabeth Wells Gallup, providing him with inside first-hand information about the Riverbank publications on the Bacon Bi-literal Ciphers and their authorship.

Outside of the records another valuable source of information for Kopec was his son Don Williams, 'Mr. Riverbank', who was born there at Riverbank in 1920. Don 'Mr Riverbank' Williams, worked at Riverbank for 35 years before retiring in 1985, and knew more about Riverbank than other person alive:

I was permanently assigned to Riverbank Acoustical Laboratories by my parent organization, the IIT Research Institute in 1976. After reading the Wallace Clement Sabine biography, I began digging through the junk room (now the museum) to find all I could about Riverbank. I became intrigued by the history and constantly pestered Don (Mr. Riverbank) Williams about anything and everything I could about this fascinating place. Don decided that because he was getting close to retiring, he would pass the duties of client tour guide over to me. Thus, with Don's help, I also gained a job-related purpose to learn all I could about Riverbank. Then, one day an article about Riverbank, the third article within a year, appeared in a local paper. After reading it, Don threw it down on the desk saying, "Garbage! Garbage! Garbage! Why can't anyone print the truth about Colonel Fabyan rather than all the garbage that others managed to come up with?" Don then turned to me and said, "If you really want to know all about the history of this place, I'll tell you what I can recall on one condition...if and only if you promise me, you will document what I say or from whomever or whatever you find about Riverbank that can be regarded as fact. Just so I can retire from Riverbank knowing that at least one document about this place tells it like it was." I agreed, not at the time anticipating that a book would result.²⁶⁹

In the course of his researches Kopec uncovered new documents and information about Riverbank Laboratories early links with the US military and intelligence in the

first World War and the contribution of the Riverbank Cipher Department headed by William Friedman in assisting the US government in important code and cipher work. Kopec also uncovered important material and information relating to the Riverbank publications on the Bacon Bi-literal Cipher. Naturally, this new material relating to a very important part of the history of Riverbank produced a discussion about the Friedmans, Elizabeth Wells Gallup and the Riverbank Cipher Department in the main body of the text and its postscript.

In the main body of the text Kopec devoted several pages to the period spent by the Friedmans at Riverbank. This profitable and informative discussion included the following explosive and far-reaching statement of enormous historical importance to Baconian and Shakespearean scholarship and the truth about Bacon's authorship of the Shakespeare works: that the anonymous *The Greatest Work of Sir Francis Bacon* published by the Riverbank Cipher Department was written by the Friedmans:

Although the Friedmans loved Riverbank, they had many reservations about Colonel Fabyan because he had broken many promises, involving back pay, title recognition in regard to published documents, and other fringe benefits. When discussing the Baconian ciphers, the Friedmans stated that they spent years working on Bacon's writings, and the results of their efforts were documented by them. However, when their book *The Greatest Work of Sir Francis Bacon* was printed in 1916, the author listed was George Fabyan. They also cited other published documents about codes that were written by them but credited to the colonel.

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For the rest of their lives the Friedmans remained silent about their authorship of *The Greatest Work of Sir Francis Bacon* endorsing the presence of the Bacon Bi-literal Cipher in the Shakespeare works and decades later when Colonel Fabyan and Elizabeth Wells Gallup were long dead wrote *The Shakespearean Ciphers Examined* in which they fraudulently pretended to the opposite position and completely lied to the whole world about it.

The question it gives rise to is, why did the fraudulent Friedmans practice a gigantic fraud on the naïve unsuspecting world-wide community of Shakespearean scholars. What or who convinced the Friedmans to henceforth maintain that they remained sceptical about the existence of Baconian ciphers in the Shakespeare plays and later downright rejected and denied it in a book written some four decades later.

The answer might lie deeply hid and buried in the labyrinths of their future career paths after their departure from Riverbank. A career which would take the Friedmans, in particular, William F. Friedman, to the very heart and pinnacle of the American Intelligence apparatus, a secret world in which he eventually rose to become assistant director of arguably the most secretive intelligence organisation in the world, namely, the National Security Agency, whose very existence was so secret that it was not officially admitted for decades. An organisation whose links to Francis Bacon and Freemasonry has never been previously revealed, one of whose early architects later became Sovereign Grand Commander of the Supreme Council, 33° (Mother Supreme Council of the World), the most powerful Freemasonry body in the world.

3.

THE ENDORSEMENT OF THE BACON BI-LITERAL CIPHER DECIPHERED BY ELIZABETH WELLS GALLUP BY EXPERTS WORKING FOR US, BRITISH AND FRENCH INTELLIGENCE

On 6th April 1917 the United States entered the war, with neither its army or navy having in place, the necessary infrastructure for intercepting enemy communications nor the expertise for analysing and deciphering them. Using his high level contacts in the military, Fabyan who had long anticipated this development and had offered the US War Department the services of the Riverbank Cipher Department that had been looking into the presence of the Bacon Bi-literal Cipher in the Shakespeare works, to train up its military personal. As Elizebeth S. Friedman later explained ‘He seemed to know months and months before we were into the war that we were going to get into the war. He kept coming down to Washington to talk to the higher-ups here, there and everywhere. He persuaded them that they didn’t have a cipher bureau, they didn’t have anybody who knew anything about ciphers and that was true.’²⁷¹

The US War Department immediately despatched Lieutenant Mauborgne, one of the few army officers who possessed any knowledge of codes and ciphers to Riverbank to assess its capabilities. Impressed with the facilities and the compound’s security on 11th April, five days after the United States declared war on Germany, Lieutenant Mauborgne recommended to the War Department that officers be sent to Riverbank for training in cryptanalysis by its Cipher Department headed by the Friedmans ‘The intelligence division of the General Staff, like the Department of Justice, is urged to take immediate advantage of Colonel Fabyan’s offer to decipher captured messages. There can be no doubt as to the safety of communications of confidential nature put into his hands, and his laboratories are provided with vaults and other means of protection against fire, theft, and other means of destruction, and his grounds are patrolled against intruders.’²⁷² Following his recommendation the Riverbank Cipher Department under the Friedmans became the United States first *de facto* cryptologic organization.²⁷³

For an early initial task the Riverbank Cipher Department was requested to decipher correspondence between Germany and Mexico for which Colonel Fabyan hired a number of Spanish and German translators. Some of the intercepted messages were of an urgent nature which the Riverbank Cipher Department attacked with great speed, on one occasion sending the deciphered messages back over the wires to Washington in a few hours. In the months that followed aside from the War department, the Navy the State Department, the Justice Department and the Post Office Department, began sending the Riverbank Cipher Department cryptographic material for the Friedmans and their colleagues to decipher and it also received an official request from the US government to instruct and train military personal in the principles of cryptology.

The first batch of army officers began arriving in the autumn of 1917. The first class of four army officers from the Intelligence Corps were the first to arrive at Riverbank, a second group of around eighty were trained in January-February 1918, and the third and final group of seven or eight was trained in March-April 1918.²⁷⁴ Later in her unpublished autobiography Mrs Friedman recalled:

At that time in the United States, there were possibly three or at most four persons who knew the meaning of the term, codes and ciphers. They were all army officers who had dealt with cryptographic communications in their professional careers....We had a lot of pioneering to do. Literary ciphers may give you the swing of the thing,

but they are in no sense scientific. There were no precedents for us to follow. We simply had to roll up our sleeves and chart a new course. We therefore became the learners or students and the teachers and the workers all at once...For eight months, we, this energetic but small unit of workers on the Fabyan estate, Riverbank, at Geneva, Illinois, performed all code and cipher work for the government in Washington.²⁷⁵

For the entire duration of their training the army officers stayed at the Aurora Hotel, close to the Riverbank estate. At the end of their course, the second class of students gathered outside the entrance of the Aurora Hotel to have their graduation photograph taken. This however was not to be any ordinary photograph. The photograph taken that day at one time used to proudly hang on Fabyan's wall at his Riverbank estate. In the presence of a journalist sent to cover Riverbank Colonel Fabyan declared that the Bacon Bi-literal Cipher was the most dangerous cipher in the world 'What makes this cipher so dangerous is the fact that you don't have to use the letters A and B. You could use squares and circles, dots and dashes, trees and bushes-any two things that can be made to look even slightly different.' He then pointed to the photograph on the wall and asked the interviewer,

'What do you see there?'

'Anything special about them?'

'Not that I notice.'

'Well there is something special, nevertheless.'

In the innocuous looking photograph the graduates were made to line up in two rows. Those at the back stood on benches. The front row including Colonel Fabyan, the Friedmans, and other members of the Riverbank staff are seated. To the untrained eye the photograph looks no different to other graduation photographs however this one conceals a hidden message. Under the direction of Friedman the army officers were cleverly aligned in such a way as to represent a human configuration of Bacon's Bi-literal Cipher. Those looking forward represent the a's in the bi-literal cipher and those looking away the b's; thus the concealed pictorial bi-literal message spells out Bacon's famous maxim 'Knowledge is Power', the phrase Fabyan had his sculptor Silvestri cast in stone above the Riverbank Cipher Department Laboratory.²⁷⁶

During the time Riverbank Cipher Department was carrying out code and cipher work for the US government and various other federal agencies plans had secretly been underfoot in Washington to establish a Cipher Bureau of its own. On 10th June 1917 the first government Cipher Bureau under Military Intelligence 8 (MI-8) was established in Washington by the War Department with Major Ralph H. Van Deman, Director of Military Intelligence, appointing Herbert O. Yardley, a cipher clerk from the State Department, as its first head.

The Riverbank Laboratories 'the first institution in America that had a Department of Ciphers' had served its country on matters of the highest national security and in three recently discovered letters published in the January 1993 issue of *Cryptologia*, Major Van Deman, the Director of Military Intelligence, Secretary of State, Robert Lansing and Colonel Nolan, all take the opportunity to express their gratitude on behalf of the United States government to Colonel Fabyan and his dedicated staff at Riverbank Cipher Department for the important work they had performed in the last six months on codes and ciphers and for the training of army personnel for the war effort at home and abroad. In his correspondence Major Van Deman warmly thanked



Fig. 42 Photograph using the Bacon Bi-literal Cipher concealing the message
'Knowledge is Power'

Colonel Fabyan for his assistance and approval in the setting up of a Cipher Bureau in Washington and related that Captain J. A. Powell, author of *The Greatest Work of Sir Francis Bacon*, would be reporting to the Cipher Bureau on his return from Europe. From the General Headquarters of the American Expeditionary Forces in France, Colonel Nolan expressed his appreciation to Colonel Fabyan for the pamphlets on ciphers he had sent over and informed him that the graduates from the Riverbank Cipher Department were carrying out the majority of the work in the code office:

WAR DEPARTMENT
OFFICE OF THE CHIEF OF STAFF
WASHINGTON

November 26, 1917

Colonel George Fabyan.
Riverbank, Geneva, Illinois.

My Dear Colonel:

I have been much gratified over your expressed approval of my plan for the establishment of a bureau of codes and ciphers in Washington. The establishment of this bureau has proceeded somewhat slowly at first, mainly for the reason that having received such important service from you I was anxious not to take any step which would seem to indicate lack of appreciation on my part, or that would tend to cause you any feeling of having been superseded or ignored. In view however of your recent letters expressing your approval of the plan I have in mind, the nucleus of a force has now been gathered and a centralization of the work will I hope result to the benefit of the several Governmental Departments. I may add that the heads of the several Departments have been consulted regarding the plan, and each has signified his enthusiastic acceptance of the proposal, so that we may now count on their cooperation.

The Bureau is beginning its work with a comparatively limited number of operators, but as it grows in efficiency and importance it will not be difficult to increase it as occasion demands. Our experience here shows that so large a percentage of messages can be handled as routine clerical work, that I feel that for the present the Bureau has a sufficiently large number of cipher experts to handle the work as it arises. Thus far the Bureau has been enabled to return messages deciphered within twenty-four hours of their submission, and we have made provision for increasing the staff as rapidly as the situation may demand.

One of the operators from the Department of Justice, whom I believe you already know, Mr. Victor Weiskopf, has been lent to the Bureau by Mr. [Alexander Bruce] Bielaski, [Director, Bureau of Investigation, Department of Justice] who is likewise contributing to the Bureau the cipher records in the possession of the Department. The same thing is planned to be done on the part of the State Department, and I am given to understand that Mr. [Leland] Harrison is writing you personally to express his sense of obligation of his share in the services you have rendered. [The next letter shows that the Secretary of State himself signed the letter.]

The Navy Department, through both Navy Intelligence and Naval Communications, has assured us of their support.

On his return from Europe Capt. [Dr. J.A.] Powell [Director, University of Chicago Press when he was hired by Fabyan in 1917 to work at Riverbank] will be ordered to report to this Bureau, so that, aside from all the other services you have rendered, it is a satisfaction to feel that you are making a valuable contribution also to the personnel of the Bureau itself.

Your proposal to conduct a campaign to secure funds for the financing of the Bureau is of a piece with your previous generosity in expending your time and energy in our behalf. But such a campaign seems to be both unnecessary and unwise; unnecessary because sufficient funds are already available for the work; unwise, because it is almost certain to arouse undesirable public discussion.

It is a difficult matter for me adequately to express the sense of obligation which I feel personally and officially for the service your staff has rendered in the past six months. At a time when all of us lacked operators capable of coping with the subject, you came forward with an offer to do for the Department work which they were wholly unable to do for themselves, and with an unexampled generosity you have borne the entire expense of the proceedings. The services you have rendered are not to be estimated in terms of money, and it is a source of regret to me that I am wholly unable to devise a method by which the sense of obligation, by the Intelligence Section in particular, may be fittingly evidenced. I trust that in the future I may have the opportunity of expressing more fully in person my sense of the great service you have rendered, and I am sure the sentiments expressed are entertained by the several Departments and will be conveyed to you in due course.

Sincerely yours
R. H. Van Deman [signature]
Colonel, General Staff,
Chief, Military Intelligence Section.²⁷⁷

THE SECRETARY OF STATE
WASHINGTON

December 19, 1917.

My dear Mr. Fabyan:

I am informed that the Military Intelligence Section of the War College has organized a Bureau of Ciphers and that it is now prepared, largely owing to your assistance, to undertake some of the confidential and difficult work the Riverbank Laboratories have been so ably performing for the Government during the past six months.

In this connection, I desire to express my deep appreciation and thanks for the patriotic service you have generously rendered, which has been of the greatest possible value not only to this Department but also to other branches of the Government.

Sincerely yours,
Robert Lansing [signature].²⁷⁸

GENERAL HEADQUARTERS
AMERICAN EXPEDITIONARY FORCES
GENERAL STAFF, SECOND SECTION (G.2)

France, May, 14, 1918.

Colonel George Fabyan,
Riverbank, Geneva, Illinois.

My dear Colonel:

I have just received your valuable and interesting pamphlets on ciphers and wish to thank you, not only for them, but also for your generous interest in our work.

Graduates of Riverbank are now doing the greater part of the work in our code office, and Colonel Van Deman has been requested to send us the other men recommended by you.

We regard this cipher work as of great importance, and thoroughly appreciate the value of your assistance and the patriotic spirit in which it is rendered.

Hoping for your continued support, I am, with best regards to both yourself and Captain [Dr. J.A.] Powell.

Very respectfully yours,
(signature)
D.E. NOLAN
Colonel, General Staff,
A. C. of S. (G2).²⁷⁹

It seems the government decision to move its cryptologic operations away from Riverbank up to Washington caused the Friedmans some degree of consternation. In her unpublished autobiography written many years after the event Mrs Friedman says Washington had asked Colonel Fabyan to remove the Riverbank Cipher Department including its staff to Washington, which she says Fabyan refused to do. At the time Colonel Fabyan did not inform the staff of this request. It seems the Friedmans had even then already acquired a taste for being at the centre of power and the privilege and status which came with working for the government and its Military Intelligence. With their ambitions for a period of time being thwarted an embittered Mrs Friedman declared the new unit was staffed with, to use one of her husband's favourite words, 'amateurs', and others, who knew absolutely nothing whatsoever about cryptology. The long passing of time had done little to assuage her venom and bitterness. Though writing many years later, the indignation she evidently felt due to her and her husband having missed the opportunity to work in, or head up, the newly formed cipher bureau for Military Intelligence, still even then caused her to abandon any generosity of spirit, and it also played havoc with her memory:

Meanwhile the Cipher Bureau had been formed in Washington just as Fabyan had formed his from anyone interested enough to try. People who had only dabbled in cryptography and only two of those, and others who knew nothing whatsoever, were gathered as a small group in the War Department. The man chosen to head the Cipher Bureau was Professor John M. Manly of the University of Chicago who had for years made a hobby of cryptography. He was commissioned in the rank of Captain. Herbert O. Yardley, who became so infamous afterwards in connection with the book, *THE BLACK CHAMBER*, who had been a telegraph operator in the State Department, was also commissioned and placed in this bureau. A college professor, Charles J. Mendelssohn, an expert in Greek and Latin and many modern languages but who knew nothing of ciphers and codes, and a man named Knott, a newspaper editor.

Soon thereafter the material which had been coming to us from Washington was no longer forthcoming.²⁸⁰

Professor John M. Manly was not chosen to head the Cipher Bureau nor was Yardley merely placed in it. Yardley was appointed its director and Professor Manly became his chief assistant.

In the meantime William Friedman's reputation as a master cryptologist had spread far beyond the environs of Riverbank and the United States. Its Cipher Department received enciphered texts from the British government comprising several hundred letters written by more than a hundred Hindu agents living in America and Britain who with the active support of the Germans were trying to stoke up a revolution in India. The challenge of deciphering them had already defeated the cryptographers of Room 40, French cryptographers, and the Cipher Bureau in Washington. Friedman took to the task with relish and quickly began to break them down. The Hindus were subsequently prosecuted for trying to buy arms in the United States in two mass trials in Chicago and San Francisco. Their secret nemesis Friedman was on hand to provide expert evidence at both trials. The San Francisco trial however proved sensational in more ways than one. One of the Hindus had cut a deal with the government and while giving evidence in the witness-box a defendant produced a revolver from beneath his robe and fired two shots killing him. The perpetrator was in turn shot down by a state marshal.²⁸¹

A few months later the expertise of the Riverbank Cipher Department was again called upon by the British government. Its War Department submitted five short messages to Friedman at Riverbank for him to test a cipher system it was seriously considering using. The messages had been enciphered by a cipher device invented by J. St. Vincent Pletts of M.I.1 (b), the British War Office cryptanalytic bureau. The machine was a modified and improved version of the Wheatstone Cipher Device, named after its inventor Sir Charles Wheatstone, the famous British scientist.²⁸²

The British Army was ready to adopt the Pletts design as a field cipher device because the War Office cryptanalysts thought it offered greater cryptographic security and reliability of operation than any other device or system available at the time. Yardley's assessment of the device was sought, and he in turn submitted the device to Friedman, who at the time was working at the Riverbank Laboratories, asking for Friedman's opinion of its security. Friedman responded that he considered the device insecure and advised against its adoption by the U.S. Army as a field cipher system. Friedman's findings were met with disbelief by the cryptanalysts who had devised the system and by Yardley, who had already concluded that the device was acceptable for U.S. Army usage. Since Friedman had only expressed his

opinion of the security of the device, he was challenged to solve a set of messages enciphered by it in accordance with the procedures proposed by the British cryptographers for its use.²⁸³

Fifteen years later Friedman would recall with a great deal of pride to his first recruits to the Signal Intelligence Service how he recovered the keys. In his memoirs F. B. Rowlett relates how Friedman was able to quickly recover 'one of the two alphabetic sequences used for enciphering the test messages by straightforward cryptanalysis and found it to be based on the keyword CIPHER'. But for a while the other keyword eluded him. On turning to Mrs Friedman he said make your mind blank and think of the first word that comes into your mind when I say a word. He said CIPHER to which Mrs Friedman immediately replied MACHINE the other keyword used 'This lucky approach of course eliminated the need for recovering the second alphabetic sequence by cryptanalysis'.²⁸⁴ Having recovered the keywords Friedman wasted little time in deciphering all five messages. The first test message read '*This cipher is absolutely undecipherable.*' Just three hours after he had received the five encrypted messages their revealed plaintexts were on the way back to London via telegraph.²⁸⁵ Plett's device for which the British army had such high hopes was subsequently abandoned by the Allied forces.

In June 1918 Friedman was commissioned and sent to France where he served under the command of Colonel Frank Moorman. In the short months serving at General Pershing's headquarters Friedman gained a great deal of practical knowledge and experience in the way both codes and ciphers were used in the field adding to the theoretical work he had been engaged in at Riverbank. When the war ended in the November Friedman pondered whether he wanted to return to Riverbank or perhaps pursue a career in genetics. Even before he had left for France his relations with Colonel Fabyan had become strained. While serving in France he had learned from his senior officers the US government had wanted to commission him almost a year earlier a request not passed onto him by Fabyan.²⁸⁶ Friedman's irritation with Fabyan surfaced in a note which Herbert Yardley head of MI8, wrote to General Churchill, the Director of Military Intelligence 'He [Friedman] feels that he missed one of the big opportunities of his life by not being commissioned in 1917, for had he been sent to France at that time he would have had an opportunity to make a name for himself.'²⁸⁷ Replying to several letters asking him to return to Riverbank Friedman censured Fabyan for concealing the offer from Washington and said that he and his wife had no intention of ever returning to Riverbank.²⁸⁸ To which Fabyan replied 'The facts in the case are that you are practically loaned for the emergency. That emergency no longer exists and in justice to yourself, your own future, and myself, I think the sooner you return to Riverbank, the better.'²⁸⁹ Friedman was demobilised on 5th April 1919 and met up with Mrs Friedman in New York. The two of them then decided to visit the Friedman family in Pittsburgh. Still apparently unhappy with the thought of a return to Riverbank and no definite offer of work at the present time from the Intelligence community they began to search for alternative employment.

With nothing else available after some more cajoling from Fabyan the Friedmans in May 1919 finally agreed to a return to Riverbank but only on their own terms and with the promise of a raised salary. Among a series of conditions, the Friedmans insisted they should be permitted absolute freedom to continue their investigation into the Bacon Bi-literal Cipher to prove or disprove Mrs Gallup's cipher.²⁹⁰ Writing years later with the confidence that their anonymous authorship of several of the Riverbank publications on the Bacon Bi-literal Cipher were unlikely to ever be discovered Mrs Friedman did what she usually did-she painted false and misleading pictures:

Colonel Fabyan managed to gather a small group of fairly interesting people and proceeded with the work of testing and authenticating Mrs. Gallup's cipher by their attempts; first to authenticate Mrs. Gallup's reading of cipher messages, then to elicit further readings by their own efforts.

...We also valiantly tried to get Colonel Fabyan to consent to some psychological tests of Mrs Gallup. With our limited knowledge of psychology, it seemed to us that her belief in the cipher had been so great that her eyes had been influenced to see things which no other eyes could see. However, every time arrangements had been made for an expert to come to Riverbank and proceed with such a test, Colonel Fabyan managed somehow to have the plans changed or cancelled. Thus, as time went on we began to be convinced that he would never fulfil his promise to "prove or disprove Mrs. Gallup's cipher" [sic].²⁹¹

Following their return to Riverbank according to the Friedmans their benefactor Colonel Fabyan failed to keep his promises and having had enough of his overbearing influence on their lives they decided to leave. However this may be, shortly after their return to Riverbank Mrs Friedman says 'requests and urgings began to come from Army officials in Washington, who had been so impressed with William Friedman's abilities in the field of communications both in cryptography and cryptanalysis, that they wished him to accept a permanent commission in the Army, and later the same Army officials began to press him to come to Washington as a civilian.'²⁹² It was the answer to their prayers. With the prospect of more attractive horizons at the heart of US Military Intelligence in Washington all that was left was for the Friedmans to make arrangements which they conducted in secret without informing the benefactor and employer Colonel Fabyan. Toward the end of 1920 the Friedmans surreptitiously negotiated contracts with the War Department to commence on 1 January 1921. Mrs Friedman called it "our secret plot" about which they only notified Colonel Fabyan a day or so before their departure.²⁹³ Mrs Friedman wanted to leave in the middle of the night. William thought this was overly cruel and unnecessarily underhand. But she made him promise to say nothing until their departure was a '*faite accompli*' [sic]. If they wanted to escape "We've got to be just as tricky as he is".²⁹⁴ After parting ways with Fabyan the Friedmans set off for a new life in Washington. William Friedman believed that "after a very limited number of years" Riverbank "will disappear from the Earth and be but a black memory."²⁹⁵ It was a wish the Friedmans dearly hoped for. They wanted to put their concealed life at Riverbank and their secret work on the Bacon Bi-literal Cipher all behind them and hoped that no one would ever discover it, a secret they remarkably got away with for more than a century-until now.

In 1921 William Friedman went to work for the War Department who assigned him to teach military codes and ciphers at the Signal School at Camp Alfred Vail, New Jersey a course for which he wrote a textbook *Elements of Cryptanalysis* that 'for the first time, imposed order upon the chaos of cipher systems and their terminology.'²⁹⁶ At the beginning of 1922 he was appointed Chief Cryptanalyst of the Signal Corps in charge of the Code and Cipher Compilation Section, Research and Development Division and in the first years of the decade his wife Elizebeth S. Friedman served as a cryptanalyst for the War Department during 1921-2 and the Department of the Navy in 1923. With her reputation growing, four years later in 1927 the United States Coast Guard which fell under the auspices of the Treasury Department sought her expertise in breaking sophisticated coded radio messages used by smugglers or 'rumrunners' during America's prohibition. But while Elizebeth was expertly breaking the codes of the rumrunners for the American Coast Guard her husband was already displaying signs of the mental stresses that were to plague him for the rest of his life:

In 1927 he had consulted Dr Philip Graven, a young Washington psychoanalyst, and for six months saw him regularly to discuss psychiatric difficulties. Just what they were remains as uncertain today as it was half a century ago, for Friedman had already become one of the unfortunate few who even in peacetime had to conceal some of their problems not only from wives but from psychiatrists. However, his subsequent history leaves little doubt that his problems included the strains of developing a double personality. The affable Friedman, always a desirable guest, always the adored father, always the normal sociable animal, seemed basically different from the other Friedman who had to think thrice before he spoke.

This strain was more than enough to account for the breakdowns which were to take place every few years.²⁹⁷

Two years later William Friedman was appointed Director of the Signal Intelligence Service in 1929, which replaced the American Black Chamber (the US organisation for codes and ciphers) headed by the legendary Herbert O. Yardley, the forerunner of the Armed Forces Security Agency and National Security Agency. In his capacity as head of the American Black Chamber throughout the 1920s Yardley regularly liaised with British and French Intelligence. On one occasion Yardley travelled with Colonel Van Deman to the French Cipher Bureau in Paris armed with a letter from the French High Commission in Washington:

HIGH COMMISSION OF THE FRENCH REPUBLIC
The General Delegate to the
General Commission of the
Franco-American War Affairs.

Colonel Churchill, Chief of the Military Intelligence Division, War Department, has especially recommended to me Captain H. O. Yardley, who is being sent to France to study the different codes and ciphers used in the transmission of cables.

I would be especially obliged to you if you would facilitate the mission of Captain Yardley and put him in touch with Colonel Cartier in charge of the cipher section in the Cabinet of the Minister of War. Also with the cipher bureau of the Department of Foreign Affairs.²⁹⁸

As indicated above Yardley was on his way to meet General Cartier the head of the cryptological service of the Deuxieme Bureau (G2) of the French Army Staff. During this period says Newton 'the quality of cryptographic and cryptanalytic skills varied greatly from nation to nation. France was generally conceded to have the finest of such bureaus, and Cartier's work was largely responsible for bringing the army's cryptologic ability to that level.'²⁹⁹ Before the war Cartier wrote a memorandum on the solution of German Army cryptograms. It proved to be an important foundation and his unequalled understanding of German cryptologic methods greatly aided Cartier and his brilliant team of cryptanalysts early in the war to solve the UBCHI system used to encipher the German high Command military communications.³⁰⁰ The very well organized French Cipher Bureau built up under Cartier's command states Kahn was the 'first echeloned organization in the history of cryptology',³⁰¹ one which proved invaluable in the war effort and the lasting security of the nation.

As is nearly always the case the work of the cryptologist is a secret endeavour and cannot for matters of national security have attention drawn to it and the individuals involved in this sensitive area do not usually become household names. But while his name and work remains unknown to the general public General Cartier's outstanding service to his country is known and appreciated by historians of the subject and other members of the French secret service past and present. Writing in 1954 Lt.-Col.

Arnaud, head of the Cipher Section of the Secretariat of the French Armed Forces, paid glowing tribute to his outstanding contribution to cryptology and service to his country:

General Cartier was early attracted to cryptographic studies. From 1900 to 1912 he was Secretary and also the active member of the Commission for Military Cryptography headed successfully by Generals Penel, Berthaut and de Castelnau. In 1912 he was appointed Head of the Cipher Section at the Ministry of War, and he remained in this position until 1921.

It was during that period, and primarily during the war of 1914-1918, that his great competence and the distinguished record of the group of cryptologists inspired by him brought his name into prominence and gave him a fame which spread beyond the frontiers of France.

The name of General Cartier is destined to remain in the roll of first-rate cryptologists in the history of national and international cryptography, as much for the direction and impetus which he gave to cryptographical research as for the invaluable successes scored under his leadership.³⁰²

Sometime after the war the *Riverbank Laboratories Publications on Cryptography* came to the attention of General Cartier and in 1921 he went as far as to have William Friedman's *The Index of Coincidence and its Applications in Cryptography* translated into French. Colonel Fabyan had the original English version printed in France and having come by a copy Cartier had it translated into French for the Cipher Bureau of the French Army under the title of *L'indice de coincidence et ses applications en cryptographie*. The English version, although completed in 1920, was not published until 1922, and for a long time after it was frequently wrongly assumed to have been actually written by General Cartier himself. Through his connection with Riverbank General Cartier became greatly interested in the cipher work of Mrs Gallup. In the June 1923 issue of *Baconiana* it is reported he actually visited Riverbank 'General Cartier, having been impressed by the internal evidence of the alleged decipherings, lost no time in paying a visit to the Fabyan Laboratory to investigate further and judge for himself the scientific accuracy of the work.'³⁰³ General Cartier himself says:

Colonel Fabyan possesses a wonderful, rich private library of Baconian and Elizabethan literature, and he kindly put his resources at my disposal. I came to the conclusion that the cypher was the logical completion to Bacon's scheme for the progress of scientific research, and that Bacon probably used it for the purpose he planned, viz., as a means of scientific record to hand down to posterity scientific truth that would necessarily be unintelligible to his contemporaries and dangerous to himself if published in the ordinary way. In carrying on this work, I had ample opportunity to form an unbiased judgement on the *personnel* of Riverbank and the character of the research they carry on under the direction of Colonel Fabyan and the stimulus of his unselfish scientific enthusiasm. And I have no hesitation in saying that the laboratory staff is competent, careful and painstaking, and the work they do is quite up to the standard of that of the best of our scientific institutes of research.³⁰⁴

In their book *The Shakespearean Ciphers Examined* the Friedmans say General Cartier never visited Riverbank. At the time of his alleged visit at the end of 1920 the Friedmans had left Riverbank to work on codes and ciphers for the United States government. The Friedmans cited the testimony of Mrs Cora Jensen Tyzzer who was at Riverbank until Fabyan died in 1936, that Cartier never came and the Friedmans also cite Cartier's own words in the preface to his *Un Probleme de Cryptographie et d'Histoire* that the projected visit never took place.³⁰⁵ At any rate General Cartier's contact with Riverbank and his interest in Mrs Gallup's cipher work was discussed

through correspondence with Colonel Fabyan who requested he subject her cipher findings to a thorough examination. He published his findings in a series of articles entitled 'Un probleme d'Histoire et de cryptographie' in *Mercure de France* from 1921-1923, and another article appearing in *The Ladies Guild of Francis St. Alban* in 1923. These articles were later collected up and republished in 1938 in a book entitled *Un Probleme de Cryptographie et d'Histoire*.³⁰⁶ These works written in French and published in France have remained mostly unknown to the English speaking world and unread by an English reading audience. They are listed by Professor Galland in *An Historical And Analytical Bibliography Of The Literature Of Cryptology*:

Cartier Henri (General). "Un probleme d'histoire et de cryptographie." *Mercure de France*, Paris, 1921, Dec. 1, No. 563; 1922, Feb. 15, No. 568. [Studies dealing with the Bacon cipher. See also Lange et Soudart, *Traite de cryptographie*, pp. 37, 292-293 ("Traduction d'une inscription cryptographiée d'apres le systeme de Friderici.")]

"Cryptographie." *Mercure de France*, Paris, March 1, 1922, No. 569 [Deals with the Bacon-Shakespeare controversy.]

"Le mystere Bacon-Shakespeare; un document nouveau." *Mercure de France*, Paris, 1922: Sept. 1, No. 581, pp. 289-329; Sept. 15, No. 582, pp. 604-656. 1923: Feb. 1, No. 591, pp. 603-635; Apr. 15, No. 596, pp. 306-338; July 1, No. 601, pp. 31-57. [A series of interesting articles on the Bacon-Shakespeare controversy. The first two Nos. 581 and 582, include Bacon's life as he tells it in the biliteral cipher, and in addition, claim to be the first publication of the entire decipherment of Bacon's autobiography by Colonel Fabyan and Mrs. Gallup. "Chaque chapitre du texte anglais est suivi d'une analyse en francais; le dernier chapitre intitule: 'Au dechiffreur' a seul ete traduit integralement." The last three articles, Nos. 591, 596 and 601, termed "Annexes," are devoted to answering the criticisms which the first two articles occasioned. See also Lange et Soudart, *Traite de cryptographie*, pp.37-43, 92, 293-295 ("Extraits de la 'Vie de Bacon' Chiffre avec le chiffre bilitere"); Locard, "Bibliographie cryptologique," p. 930.]

"Le chiffre de Bacon et le mystere Bacon-Shakespeare." *X Information, Bulletin mensuel politechnicien*, Paris, July 1923, pp. 32-36.

Un probleme de cryptographie et d'histoire, Avec 38 documents cliches. Paris: Editions du Mercure de France, 1938. pp. 330. In-8o. [Deals with the problem of the ciphers alleged to be contained in early editions of the work of Bacon and authors contemporary with him. With "Bacon's Life as he tells it in the biliteral cypher," extracted from *The biliteral cypher of Sir Francis Bacon*, by Elizabeth Wells Gallup.]

"Le systeme cryptographique de Bacon." *Mercure de France*, Paris, May 1, 1939, Vol. 291, pp.687-693.³⁰⁷

In these articles General Cartier stated that given the difficult nature of the bi-literal cipher it was possible for the decipherer to make genuine errors and that any two decipherers were bound to disagree on a permissible number of words or phrases without it impugning the integrity of the decipherment of any given passage or text as a whole. In the articles printed in the *Mercure De France* having examined a number of passages General Cartier endorses the authenticity of the decipherments:

we think it right to insist on the fact that from the standpoint of cryptography we have personally undertaken the work of checking a considerable number of passages, and that we are of opinion that the discussion should leave on one side the cryptographical point of view, which seems to us unassailable.³⁰⁸

In his article entitled 'Le Chiffre De Francis Bacon', published in the now defunct *Fly Leaves of the Ladies' Guild of Saint Albans* General Cartier summarized his findings:

1. There is a cryptographic system which was invented by Bacon between 1576 and 1579

and was first described by him in his work *The Advancement of Learning*, published in London in 1605.

2. Printing establishments in Bacon's time had the assortment of types needed to apply the system in order to encipher secrets to be hidden in the external text.
3. Nobody, at least to my knowledge, has discovered any document (manuscript notes or correspondence of some sort) clearly indicating an application of Bacon's system in printed or other works.
4. I consider the decipherments made by Mrs Gallup and verified by the cryptologists of the Riverbank Laboratories under the direction of Colonel Fabyan to be valid.
5. I have no opinion whatever with regard to any other decipherments made by that lady, whose integrity appears to me to be beyond suspicion.
6. I disclaim any competence as regards the conclusions to be drawn from the enciphered biography of Francis Bacon.

My classification for the majority of the letters agreed with that of Mrs Gallup; there was disagreement to the extent of about 10 percent of the letters; as to the letters which I had considered to be of doubtful form I decided I was in error and adopted Mrs Gallup's classification for them. However that may be, and despite the differences there were between my classification and those of Mrs Gallup, my decipherments agreed with hers save for a few words.³⁰⁹

From before the turn of the twentieth century there had been a growing consensus among German, and to a lesser extent, Dutch academics that Bacon was in fact the secret author of the Shakespeare works. The endorsement of Gallup's decipherments by General Cartier had the striking effect of vigorously renewing the debate in post war France. Opinion, as it had been in Germany and Holland was divided, with opposing views warmly expressed in numerous articles, some it has to be said more scholarly than others. General Cartier's endorsement of the bi-literal cipher was also not to go unnoticed in the close knit world of cryptology. Two years after his series of articles two French army officers Andre Lange and E. A. Soudart the '*Former heads of the Cipher Bureau at General Headquarters*', published in French a *Treatise on Cryptology*. The historical treatise is listed by Professor Galland in *An Historical and Analytical Bibliography of the Literature Of Cryptography*:

This excellent general text on cryptography gives considerable information concerning the history of cryptography, theories of ciphering, examples and methods of deciphering codes, and a bibliographical list of about 100 items, pp. iii-xv. It is one of the best of modern French works on the subject.³¹⁰

This French work originally published in 1925 with a new edition in 1935 is virtually unknown to and unread by the English speaking world and notice of it does not appear in the Friedman's *The Shakespearean Ciphers Examined*. The motivation and purpose for producing *Traite De Cryptographie* were concisely stated by Lange and Soudart senior members of French Cipher Intelligence in their preface:

There exist, to our knowledge, very few works dealing with Cryptography and Decrypting. Several are notable. But, in addition, as such works, to be consulted with profit, require a fairly extensive knowledge of foreign languages, the mass of information which they contain makes them hard to read for those who desire to obtain enough of the general principles to embark upon the details of practice. Besides, none of these books treats the subject in its entirety: Each treats only one of the sides. Outside of a brochure by Kerckhoffs, on military cryptography, published in 1883, which is not up to date as to the systems now in use, we

know of no methodical exposition, at once compact and complete, of the science of Cryptography and the art of decrypting.

The work hereinafter given has for its object the bridging of this gap. Ten years spent in cipher work, during the World War at G. H. Q., and after the war for our personal edification, have led us to undertake this task. The complexity of the questions treated has made it necessary for us above all to be clear, and to reject deliberately technical expositions susceptible of making the demonstrations heavy and tiresome. Nevertheless, one will find in the following chapters sufficient information to permit those interested to carry their researches further, notably a bibliography more complete than any heretofore published, together with the publishers of the more important references. The bibliography alone is of inestimable value, most of the works listed being today out of print (unfindable).

We have written this book for the general public, always so open to all that touches on science. We have written it also, more especially, for officers, and, let us add, as much for Reserve officers as for those on the active list. One must not forget that it is the Reserve officers who performed most of the cipher work for the general staffs during the entire period of the World War, and that the Cipher Bureau at G. H. Q. was headed by Reserve officers from February 1917 until demobilization. Those who read this may perhaps in their turn be called to fill the posts which their elders once had the honour to hold. This book will be, we believe, of some help in their beginnings, and we hope will enable them to avoid the difficulties which we had when we started.

We think that cryptographic studies should be of interest to every Frenchman. The services rendered in the war by decrypting units have shown the worth of cryptanalysis. Since the war, a recrudescence of interest has taken place along these lines. May the explanations to follow bring a modest, but efficacious, contribution to these attractive studies.³¹¹

The treatise is divided along three distinct lines: historical exposition, cryptography by means of letters and numerals, and cryptography by means of figures and symbols. In the first part devoted to an historical survey of cryptography, on reaching the seventeenth century, the two French authors in summarising General Cartier's articles provided the French reader with a clear concise description and demonstration of the Bacon Bi-literal Cipher. The two French cipher experts acknowledge that most of the information relating to Bacon's cipher is taken from the articles written by General Cartier. They also reveal they were aware that in the eighteenth century Horace Walpole in "Doutes historiques" (historical doubts) had questioned whether William Shakespeare was the true author of the works bearing his name and that later writers had attributed the Shakespeare works to Bacon before starting with reference to Mrs Gallup's bi-literal decipherments 'The most recent decryptings seem to confirm this hypothesis':³¹²

The seventeenth century is the period in history during which cipher reached its highest degree of perfection. It is not a century of inventions, since at this time the great systems were already in existence. The art of cryptography and that of decrypting were nevertheless at this time the object of so great an interest on the part of the kings and princes, that great minds did not scorn to make deep studies of these sciences, and the ciphers of the period acquired in consequence a great reputation for security, since some among them have resisted up to our time all the efforts of cryptanalysts.

In the first half of this century, in the times of Elizabeth, James I, and Louis XIII, lived Bacon, Rossignol, and Cospi. The first, philosopher and savant, as well as politician and orator, has written works in the plain text of which is hidden an enciphered text, of which the decrypting is at present hardly started....

Sir Francis Bacon, Baron of Verulam, better known under the name of Chancellor Bacon or Lord Bacon, member of the Council under Elizabeth, the Lord Chancellor under the reign of James I (1561-1626), was the inventor of a cryptographic system to which he gave his name

and by means of which he introduced into his works texts of ciphers. The study of these texts undertaken many years ago by specialists and continued in our time under the direction of General Fabyan, U.S.A., has brought out results which have recently been revealed by General Cartier, and tend to bring in a new light on an historical problem which has long occupied public opinion, namely the possible identification of Lord Bacon with William Shakespeare.

The process of Lord Bacon was first mentioned by him in the 1605 edition of his work "Advancement of Learning" which consisted of only two volumes, and was described very explicitly in the larger edition of 1623 of the same work, published in Latin under the Title "De dignitate et augmentis scientiarum," comprising nine volumes. General Cartier thinks that at the time of the first publishing, Bacon, fearing that the discovery of his cipher might cost him his head-the English tribunals, at this time, considered the mere fact of having corresponded in secret characters as an aggravating circumstance-preferred not to mention his system except in vague terms without describing its characteristics. Eighteen years later, experience having shown him that nobody had appeared to doubt the explanation which he had made of his cipher and desiring that the story which he had hidden with so much care and which one recognized to be the secret history of his life and of his time, should not remain forever unknown, he gave a detailed description of a cipher called by him "bilateral" cipher, accompanied by very explicit example, so that there should be no doubt on the manner in which it should be used....

The process of Lord Bacon has been mentioned by Kluber, Vesin, and Fleissner von Wostrowitz. A hundred year later (1685), a German author Frederici described a similar system, of which he stated that he was not the inventor and which the original, according to him, dated back to a period before that of Bacon. In reality, this system is that of Bacon's slightly modified....

Bacon's system, according to the data given by Gen. Cartier, was used by Bacon in his "Novum Organum" and in the works of his contemporaries, Bright, Burton, Peele, Spenser, Ben Jonson, and Shakespeare. According to recent information, the decrypting done on the above texts by Mrs. Gallup and Mrs. Wells will have brought to light a "Life of Bacon," by himself, containing matter of the greatest interest concerning the history of England at the time of Elizabeth and concerning the true identity of Shakespeare.

Frederici's system, besides, would have served to encipher the inscription of 1616, on Shakespeare's original tombstone, in the church at Stratford-on-Avon.

...The systems of Bacon and Frederici are double substitutions of which the only difficulty, once the key is known, is the identification of the typographical character used. The operations of encipherment and decipherment, theoretically simple, are in practice extremely long and complicated, which explains the difficulties which the cryptanalysts have had to overcome and the time which it has taken them to obtain results....Let us add that the researches should not be limited to the books printed in England at the time of Bacon and Shakespeare, but should cover as well the editions of the seventeenth century, which reveal upon minute examination the different typographical forms which are the base of the above-mentioned cryptographic systems.³¹³

Around the time General Cartier was endorsing Mrs Gallup's bi-literal cipher decipherments in a series of articles in French periodicals, an article appeared in the now obscure and defunct *Cassell's Weekly* apparently written by a British intelligence officer who had secretly operated in France throughout the first World War at GHQ. The virtually unknown article fortuitously appeared exactly three hundred years after the publication of the 1623 Shakespeare First Folio in the May edition of 1923. The article is prefaced by a note on the author from the Editor. There are only two copies known to exist of this May 1923 edition. One is housed at the British Library. This copy is in such poor condition it can only-with permission-be examined at the library. The other known copy is held by the Bodleian Library, Oxford. As far as I am aware

the main body of the text has not hitherto been reproduced in any scholarly journal or publication. Given its relative inaccessibility I have decided to reproduce the Editor's note and the text written by Major Stevenson (a pseudonym?), in full:

BACON'S REAL LIFE STORY
An Expert's Note on the Secret Cipher

[Major Stevenson, who has written the following note on the Baconian cipher, is an expert of high standing on all questions of codes. He was a well known, mysterious and ubiquitous figure at G. H. Q. and over the whole front in France throughout the war, being known as the "Hush Hush" man-the deciphering of enemy messages being regarded necessarily as ultra secret.

A discovery of the late Colonel Fitz-Gerald, Private Secretary to Lord Kitchener, Major Stevenson had triumphs of far-reaching importance, although known only to a handful of higher Staff Officers. In the early days he was pitted single-handed against a galaxy of German Professors, and at the time of the first Zeppelin raids Lord Kitchener himself took the keenest personal interest in this struggle of wits.

A scholar, a cousin to R.L.S., it is not necessary further to emphasize both his interest in literature and his authority when discussing ciphers.-Editor.]

Note on the Baconian Cipher and its particular
method and application by Bacon himself

This cipher, which is described in most elementary text-books on Cryptography, is a form of simple "substitution"-that is, one in which the "cryptogram" contains, instead of the actual letters in the "clear," other letters which have been substituted. The letters used as substitutes may be employed singly (*i.e.* one letter or point in a series of numbers in the cryptogram representing one letter in the "clear"), as in the cipher invented and used by Julius Caesar, or in that which was used by Marmont during the later stages of the Peninsular campaign, and which (being more scientific, attempting to baffle solution effected by means of counting frequencies of the occurrence of similar letters) is said to have puzzled Wellington's staff.

The letters of the cryptogram may also be used in groups, each group representing one letter of the "clear," and this is the plan adopted by Bacon. He employs the permutations and combinations of any two letters of the alphabet-say A and B-arranged in groups of five. For example:

A A A A A = A
A A A A B = B
A A A B B = C

and so on.

Well Chosen Types

The application of the cipher by Bacon is dependent entirely on the use by the printer of two founts of type, which we may call fount A and fount B. The slighter the distinction between the impressions of the types of the two founts, the greater, obviously, will be the security against detection. The types actually used in the editions of the various authors of which the text was used by Bacon for communicating his story were singularly well chosen for the purpose.

Some of the letters are quite distinct from each other, and this Bacon doubtless thought (because he dared not overdo the security touch) would be sufficient to put an acute searcher, who had read Bacon's own description of the cipher in his "De Augmentis," on the trail. Many of the letters, on the other hand, are so like each other that it requires very keen vision,

or even a magnifying glass to distinguish them. This would, thought Bacon, afford the required degree of concealment from the common reader, whose curiosity might be aroused.

The whole scheme was quite successful, perhaps too successful to suit Bacon's vanity, in that the author's miraculous literary merits—to say nothing of his birthright—and his colossal output, enough for ten men, surely, when one remembers Bacon's manifold other activities, have remained hidden for nearly three centuries. In submitting to the printer the manuscripts of a text which was to be used for conveying his cryptographic message, all Bacon had to do was to arrange with the printer that wherever a dot was placed under a letter the type for this letter should be taken from, say, fount A, the type for all other letters being taken from fount B.

An Example

Let us take an example. Suppose Bacon wanted to convey the message “Bacon wrote this,” and used the passage:

! ! ! ! !
 What a fool honesty is, and trust, his

 ! ! ! ! ! ! !
 sworn brother, a very simple gentleman

 ! !
 The Winter's Tale.

First, for his own use, he would divide up the letters by some slight mark (shown by !) which could easily be erased after it had served its purpose. Let the letters to be enciphered have the following substitutes according to the conventional substitution alphabet:

Clear.	Cipher.	Clear.	Cipher.	Clear.	Cipher.
B =	AAAAB	W =	BBBBA	T =	BABBB
A =	AAAAA	R =	BBBAB	H =	BAAAB
C =	AAABB	O =	AABBB	I =	BBBBB
O =	AABBB	T =	BABAA	S =	ABBBA
N =	BBABB	E =	ABBBB		

The A's of the letters in the conventional alphabet will be represented by type (no matter for what letter) of fount A, and the B's by type from fount B. Dots are placed, accordingly, under the appropriate letters of the MS., and the printer selects his type accordingly.

How Bacon Worked

Of course, it would have been much easier for Bacon to work with a proof copy in *type*, before proceeding to encipher, and the suggestion at once arises whether he did not do so. Was it not simply the printer to whom he conveyed some portion of the bribes which he himself took, on his own confession, from other people with so little compunction? This would have been much simpler, easier, and would have involved much less risk of “leakage.” If the cryptogram had been solved in Bacon's own day, I wonder whether the legal annals of the epoch would have been piquantly enriched by what would have corresponded (in present-day practice) to a series of libel actions against the Lord Chancellor!

B. J. STEVENSON.³¹⁴

In the Summer of 1918 Yardley armed with his letter of introduction from the French High Commission in Washington arranged to meet General Cartier to explain his mission to study the different codes and ciphers encountered and used by the French Signal Corps. After listening to his request Cartier contacted Captain Georges Painvin ‘the great cipher genius of France.’³¹⁵ The brilliant French cryptanalyst had a legendary reputation as ‘the most skilful cryptographer in all the Allied Governments’ and Yardley recalled a lecture given by Colonel Frank Moorman, a Staff Officer at American General Headquarters, who unreservedly stated ‘Captain Georges Painvin, the chief code expert of the French, an analytical genius of the highest order, was a regular wizard in solving codes.’³¹⁶ For much of the war Painvin had served in the office of General Cartier. His single greatest achievement came when he broke the ADFGVX cipher, the notoriously difficult field cipher used by the Germans at the latter end of the war. During the last weeks of the war Friedman was assigned to Painvin’s cryptanalytic group to assist the Frenchman on the intercepts of ADFGVX system.³¹⁷

Painvin came to the attention of General Cartier by sending him a memorandum outlining a simplified method of breaking the ABC system used by the Germans in the early stages of the war. In the words of Kahn it marked the beginning of his rise to prominence. The Frenchman ‘was destined to become the Perseus of cryptologists in the epic struggle of World War I, slaying one German cryptographic Gorgon after another.’³¹⁸ An excited and slightly awed Yardley was introduced to Painvin by his superior General Cartier. Their shared expertise in cryptology formed the basis of a warm and lasting friendship ‘I became an intimate member of his household and spent many quiet evenings there, listening to his brilliant discussion of cryptography’, Yardley later recalled with some affection.³¹⁹ The great Painvin was also to add to his education, one which Yardley would use to great effect in the years to come:

Painvin gave me a desk in his office and opened his files to me, and I made the most of the opportunity to study under this master, whose instruction and inspiration were to stand me in good stead, when later, from 1919 to 1929, I directed the energies of a group of cryptographers, deciphering the secret codes and cipher messages of foreign governments.³²⁰

The French cipher experts Cartier and Painvin must have often discussed the Bacon Bi-literal Cipher with Yardley, the head of the *Cipher Bureau (MI-8)* and no doubt Yardley discussed the Bacon Bi-literal Cipher with Friedman with whom Yardley had a very long private and professional relationship. When MI-8 was finally disbanded in October 1929 Yardley wrote *The American Black Chamber* revealing secrets about his time working as a codebreaker for US Intelligence which was published in 1931 and that year he also wrote a little known and long forgotten article for *The Saturday Evening Post* entitled ‘Cryptograms and Their Solution’, one not mentioned by the Friedmans in *The Shakespearean Ciphers Examined*:

A aaaaa B aaaab C aaaba D aabaa E abaaa
 F baaaa G baaab H baaba I babaa J bbaaa
 K bbaab L bbaba M bbbba N bbbab O bbbbb
 P babba Q babbb R abbbb S aabbb T aaabb
 U bbabb V abaab X aabab Y babab Z ababa

More has, perhaps been written about the biliteral Baconian cipher, attributed to Lord Bacon, than any other single form of secret communication. In this cipher the entire alphabet may be expressed by the two letters *a* and *b* in combinations of five.

One of the theories of the Baconians is that the wise men of the past did not dare write their scientific discoveries for fear of being put to death. Thus they left to posterity their knowledge by means of the biliteral cipher. This was done by using two different kinds of type in printing their literary efforts. This theory flourishes because of the fact that books of this period were actually printed with different-shaped type. Those with thin edges are called *a*'s by the Baconians and those with thicker lines are *b*'s. Thus, if there are four letters with thin edges-*a*'s-and one with heavier lines-*b*-we have *aaaab*, which equals the letter *b* in the biliteral cipher. Continuing in this fashion, many students have given the world some curious readings. Excavations have actually taken place in England for hidden treasure as a result of these decipherments. One reading from the original of one of Shakespeare's plays, if we are to believe the decipherer, is a message from Francis Bacon, who states he is the rightful author and the illegitimate son of Queen Elizabeth. I should add what, no doubt, the reader already knows: The type are different because they were made from imperfect moulds during the early forms of printing, and the so-called *a* letters and the *b* letters are so nearly alike that the decipherer may use his own imagination in his selection. Hence these curious decipherments.³²¹

It starts by stating that perhaps more has been written about the Bacon Bi-literal Cipher than any other single form of secret communication. The opening statement is followed by a description of the Bacon Bi-literal Cipher 'the entire alphabet may be expressed by the two letters *a* and *b* in combinations of five'. What it does not say is whether or not this is the same combination of *a* and *b* letters for each letter of the alphabet as originally given by Bacon in *De Augmentis*. It is not. The example given here radically differs from the form in which it was first presented by Bacon. The first three letters of the alphabet in the article A, B, and C, are given the same *a* and *b* combination as given by Bacon. But from D onwards the assignment of *a*'s and *b*'s differs from the combinations given by Bacon. The letter combination in the article for the letter D is the letter for E in the original bi-literal cipher, as is the case for E, F, G, H, I, which in the original bi-literal cipher represented I, R, S, T, W, respectively. Moreover the letter combinations alongside the letters J, K, L, M, N, O and U in the article find no equivalent in the original given by Bacon. In addition the illustration in the article does not follow the 24 letter Elizabethan alphabet where I and J and U and V were interchangeable and nor does it follow the modern 26 letter alphabet. The illustration provides only twenty five letters-completely omitting the letter W. These deviations, are of course, not mistakes but deliberate, done with a definite purpose. This Rosicrucian device of making what seems to be a 'mistake' is designed to attract the attention of the initiated. Outside the bi-literal illustration in the column directly concerning Bacon and his bi-literal cipher the rest of the text ('aaaab' is counted as 5) comprises of 287 words Fra Rosicrosse in kay cipher which minus the block 'aaaab' $287-5=282$ Francis Bacon in kay cipher. If the number 282 is added to the numerical equivalent of the missing W in simple cipher (21): $282+21=303$ which when the null '0' is dropped it leaves 33 Bacon in simple cipher. Thus we have in a combination of kay and simple cipher Francis Bacon, Shakespeare, Brother of the Rosy Cross.

CRYPTOGRAMS AND THEIR SOLUTION

(Continued from Page 21)

of Spain and the King in France. The King who discovered the cipher with fifty designs, and turned the ver to His Majesty. wards learned of this evenge by accusing the of having the devil in and denounced Viète as a nek magic before the tribunal at Rome. For- ete, he was as clever at e was at cryptography, nek by explaining how

eenth century was not pher experts. During the King's troops under the the Prince of Condé, of Réalmont—which was de- ie Huguenots—the Prince point of withdrawing, due nined resistance of the de- en a messenger bearing a atch from the town was ine Rossignol, the Prince's rd, solved the message in . It was an appeal to the of Montauban, telling them garrison was almost out of r, and that the town must if a supply was not immedi- l. The Prince of Condé re- e cipher and its solution to ander of the town, with the at if conditions were as stated oss of life was scarcely worth e commander of the garrison point and surrendered.

f the oldest and simplest ciphers d in military operations is the d Julius Caesar cipher. In this tter of the alphabet is repre- by another letter of the alpha- e, two, three, or four spaces, preceding on following the lletter. In its simplest form, B A, C equals B, D equals E, and . Though the invention of this a is attributed to Caesar, it is a that it was used by the Pheni- and Carthaginians. It continued e for hundreds of years, and in a fied form was used by the Ger- in 1870-71 and by the British s during the South African War. gar Allan Poe's Gold Bug is the famous cryptogram in fiction. e the letters are represented by ary symbols. This method of se- communication dates back to the lent Egyptians, who used simple e to disguise treatises on the ent. The author of the famous e may be roundly asserted

that human ingenuity cannot concoct a cipher which human ingenuity cannot resolve," ran a cipher column in his newspaper, defying his readers to devise a cryptogram which he could not read. Just how much Poe knew about the principles of cipher as developed 100 years later, during the World War and after, is not known, but he was clever enough to decipher all messages submitted to him except two which were unfair examples of the art. It is comforting to know that Poe, despite his genius, made mechanical errors. The frequency table for his cipher in the Gold Bug, as originally published, did not agree with the cryptogram. In writing the story, Poe found it necessary to make a slight change in the cryptogram, but failed to make the necessary changes in the frequency table which gave the number of occurrences of each symbol.

Seeking Ciphers in Shakspeare

Philip II, of Spain, in 1572, used a curious-looking cipher for correspondence with his brother, John of Austria. The original is in the archives at Simancas, Spain. It is a large table made up of the letters of the alphabet, consonant-vowel digraphs such as *ba, be, bi, bo, bu*, and common trigraphs such as *BLE, CRE, PRE*. The cipher symbols are letters and one and two figure combinations modified by ? and the like. To encipher "cryptography" it is first divided C R Y P T O G R A P H Y, and enciphered equals 1 14 18 9 16 7 4. 9 5 48. I should like to see the modern telegrapher copy this over the wire.

There are extant several hundred cipher pages of the Elizabethan period. In one, the Queen of England is "Aries" and the King of Spain, "Scorpio." In another cipher the Pope is "Beware" and the Emperor, "Doubt." Father Creighton and Father Parsons are "Weasel" and "Ferret." In still another cipher we find the Queen Mother as "Mean" and the French King, Henry III, "Ignorant." French cavalry are "ells of velvet," and guns, "barrels of salt."

During the World War we found this same type of secret communication among spies. "Uncle has recovered" is "We are no longer under suspicion," and "Uncle is ill" is "We are under suspicion." Sometimes more definite information is conveyed. "Please go to Selfridge's and buy me six blouses on Friday next" means: "Six raiders will bomb Mannheim on Friday next."

More has, perhaps, been written about the biliteral Baconian cipher, attributed to Lord Bacon, than any other single form of secret communication. In this cipher the entire alphabet may be expressed by the two letters *a* and *b* in combinations of five.

A-aaaa	B-aaaab	C-aaaba	D-aaabaa	E-abaaa
F-baaaa	G-baaab	H-baaba	I-baabaa	J-babaaa
K-bbaaab	L-bbaab	M-bbaaba	N-bbbab	O-bbbba
P-babaaa	Q-babab	R-babba	S-babbb	T-naabb
U-bbaab	V-bbaab	X-baaba	Y-babab	Z-ababa

One of the theories of the Baconians is that the wise men of the past did not dare write their scientific discoveries for fear of being put to death. Thus they left to posterity their knowledge by means of the biliteral cipher. This was done by using two different kinds of type in printing their literary efforts. This theory flourishes because of the fact that books of this period were actually printed with different-shaped type. Those with thin edges are called *a*'s, by the Baconians, and those with thicker lines are *b*'s. Thus, if there are four letters with thin edges—*a*'s—and one with heavier lines—*b*—we have *aaaaab*, which equals the letter *b* in the biliteral cipher. Continuing in this fashion, many students have given the world some curious readings. Excavations have actually taken place in England for hidden treasure as a result of these decipherments. One reading from the original of one of Shakspeare's plays, if we are to believe the decipherer, is a message from Francis Bacon, who states he is the rightful author and the illegitimate son of Queen Elizabeth. I should add what, no doubt, the reader already knows: The type are different because they were made from imperfect molds during the early forms of printing, and the so-called *a* letters and the *b* letters are so nearly alike that the decipherer may use his own imagination in his selection. Hence these curious decipherments.

Count de Mirabeau, French orator and statesman during the French Revolution, invented a very ingenious cipher, especially for that period. It follows:

1	2	3	4	5
ofxma	nibza	helrz	egqtd	puyvj
12345	12345	12345	12345	12345

The order of the letters may be changed at will. In this cipher each letter is represented by two figures. Instead of writing 32, 22, 51, 31, 41, 34 for "cipher," the figures are written in two columns: 3 2 5 3 4 3. Since the figures 6, 7, 8, 9, 0 do not occur, these may be used as nulls—figures that have

no meaning—in order to disconcert the hostile decipherer. With the use of nulls, the word "cipher" may read 6 3 2 5 3 7 4 3. The two horizontal lines are now sent as the message: 6325, 3743, 1221, 1214. The advantage of this ingenious system is that it has the appearance of code and would, because of this, offer some difficulty of solution.

Unsolved Codes of the Revolution

The revolutionary ciphers are of varied types, so varied indeed that many writings of Jefferson, Madison and Monroe remain undeciphered, though many attempts have been made to read them. There are also in the Government archives many passages in diplomatic correspondence that still remain a mystery. The attempts at decipherment have been made by historians; to my knowledge, no professional analyst has ever undertaken the task. One of the methods during this period is a table of alphabets used with a key. In a letter to Madison from Edmund Randolph we find: "Let the key word be the name of the Negro boy who used to wait on our common friend, Mr. Jas. Madison." The Negro boy's name was Cupid.

Dictionaries were also used during this period, a numeral indicating the page number, A or B the column, and Roman numerals the line. A code word would then read: "45 A xxiv." Special codes were also made up consisting of letters, syllables, names of persons, places, and the like, and each given a number. This type of small code eventually led to the modern codes used by governments and the business world. Governments, for the most part, are interested in secrecy only. The business world, interested more in economy, uses codes containing 100,000 or more words and phrases which are represented by arbitrary five-letter groups such as *babad, fakaw, gleod, slido*. The cable regulations permit ten letters of this type as one chargeable word. The sentence "When can you ship one thousand bags of coffee?" may be encoded: *Slido*—when can you ship—and *fakaw*—one thousand bags of coffee. *Slido* and *fakaw*, the two code words representing these phrases, are now joined together—*slidofakaw*—and sent as one cable word. Here we have nine words reduced to one.

In written dispatches during the Civil War, the Confederates used arbitrary signs after the manner of the Charlemagne alphabet—shown on

Fig. 43 Article written by Herbert O. Yardley head of the US Cipher Bureau (MI-8) conveying the secret message in Kay and Simple Cipher Francis Bacon, Brother of the Rosy Cross, is Shakspeare

4.

THE STORY OF MAGIC BY FRANK B. ROWLETT (WITH A FOREWORD AND EPILOGUE BY DAVID KAHN) THE MOST DECORATED CIPHER EXPERT (WITH FRIEDMAN) IN US HISTORY SECRETLY REVEALS BACON IS SHAKESPEARE

His [Friedman's] comments also proved that, after nearly three decades of government service, he had mastered the political art of unequivocal ambiguity.

[James Gannon, *Stealing Secrets, Telling Lies: How Spies and Codebreakers Helped Shape the Twentieth Century* (Washington, DC: Brassey's, Inc., 2001), p. 95]

Early in 1929 before the Black Chamber had ceased to exist secret plans were underway to transfer its work to the Signal Corps. The army had decided to centralize its cryptographic and cryptanalytic functions and on 10th May 1929 all responsibility for cryptanalysis transferred to the army under the authority of the Chief Signal Officer Major General George S. Gibbs. In June General Gibbs arranged a meeting to discuss the forming of a new organization. It was attended by three senior Signal Corps officers and the head of the Code and Cipher Compilation Section, William F. Friedman. It was agreed the cryptologic unit should be organised into four sections: Code and Cipher Compilation, Code and Cipher Solution, Intercept and Goniometry (direction finding), and Secret Ink. It was decided that the new unit would be called the Signal Intelligence Service with William F. Friedman its director.³²²

While waiting for the final details of the new organisation to be worked out, in October 1929 Friedman went to New York to supervise the transfer of the Black Chamber's records and files to Washington. 'Then he set about planning his new task. It was to have a lasting effect on him, as he was to admit years later. 'You may be interested to know,' Friedman wrote to William Bundy, Henry Stimson's biographer, in discussing the work of the Black Chamber, 'that my own feelings on the ethical point at issue are quite ambivalent-and have been for a long time. I have often wondered whether a good portion of my psychic difficulties over the years are not attributable, in part at least, to that ambivalence. Were it not for the fact that what I learned from my work in that segment of the whole field was applied very directly to improvements in our own systems, I am sure the psychic effect would have been much more serious.'³²³ In his groundbreaking history of the NSA, of which the Signal Intelligence Service was a direct forerunner, James Bamford precisely communicates the exact time, indeed to the very minute, when the Signal Intelligence Service was officially born:

At seventeen minutes past the hour of ten o'clock on the morning of April 24, 1930, the Signal Intelligence Service was born. It was at that moment that the chief signal officer officially received the order from the Secretary of War setting out the duties and responsibilities of the new organization.³²⁴

His source for this statement is the virtually unknown work commissioned by the Army Security Agency, a linear evolution of SIS, and predecessor of the National Security Agency. The once classified 3 volume history of US intelligence privately printed in Washington DC by the Army Security Agency was not known to writers prior to Bamford and has never been on commercial sale. It came too late to be listed by Galland and is not listed by Shulman, nor could I locate it in Peterson's *American*

Intelligence, 1775-1990 A Bibliographical Guide. The work is not available in any of the leading English public libraries nor can it be readily obtained in public libraries in the US. A copy of this rare work is held by the National Defence University Library at Fort McNair, Washington DC. Its highly distinguished author Professor Theodore W. Richards, America's first Nobel laureate in chemistry, was the former head of the Secret Ink Subsection of Yardley's MI-8. Under the heading 'The Signal Intelligence Service Officially Established' Richards begins by stating 'By order of the Secretary of War, The Adjutant General officially notified the Chief Signal Officer of the changes in the War Department policies relating to codes, ciphers, secret inks, radio interception, and goniometry. The text of this letter was substantially that drafted by Major Albright and Mr. Friedman and is so important that it should be quoted in full'.³²⁵ The document printed by Professor Richards runs to seven pages and concludes 'By order of the Secretary of War: /s/ Alfred J. Booth Adjutant General'.³²⁶ Beneath the document Professor Richards says 'While the War Department Signal Intelligence Service was designed to operate under the control of the Chief Signal Officer, general staff supervision of its activities was exercised by the G-2 division of the War Department General Staff.'³²⁷ In a footnote to the text giving the order to officially establish the Signal Intelligence Service Professor Richard states that the seven page document is:

Quoted from the copy on file in the Office of the Director of Communications Research. This bears the stamp of the Office of the Chief Signal Officer dated 1017 hours, 24 April 1930. See File AG 311.5 (4-14-30) Pub.³²⁸

Most fittingly for a cryptologic organisation the precise time and date selected for its birth was no arbitrary choice. The time of its birth concealed a cipher, a Baconian cipher. There are five letters in the word April and the numbers in the time and date $1+0+1+7+2+4+1+9+3+0=28$: $5+28=33$ Bacon in simple cipher.

One of the first tasks Friedman faced in organising his new unit was the recruitment of a small number of staff who possessed the necessary skills and aptitude required for working in such an unusual rarefied field and who were effectively prepared to commit themselves to a lifetime service to the US government. The official account of the origins of the SIS says prospective recruits 'were given to understand that the Signal Intelligence Service was seeking to establish a permanent corps of trained experts in cryptology and that no one who was not disposed to make this his life work would be engaged. It was recognized that the specialized nature of the work and the fact that work of this kind does not have its counterpart in civilian affairs, would tend to make individual employees more and more dependent for a livelihood upon the continued security of tenure of his position in the War Department.'³²⁹

Ideally, Friedman was looking for individuals with a background in mathematics and languages. He chose three names out of the eight provided by the Civil Service Commission: Frank B. Rowlett, Abraham Sinkov and Solomon Kullback. Rowlett had the previous year graduated in science and mathematics from Emory and Henry College in Virginia and at the time was teaching mathematics and chemistry at Rocky High Mount School. On 1st April Rowlett achieved the distinction of being the first to join Friedman at SIS marking the beginning of a lifetime association which would in the years to come crucially shape the future of cryptology in the United States. They were joined a little over a week later by Sinkov a teacher from New York who had graduated in 1927 from City College in New York and who had recently acquired a master's degree at Columbia. Kullback the third recruit to arrive at the SIS came

from a similar background. He received his degree in science from City College in 1927 before moving to Columbia for his master's degree. Kullback and Sinkov each went on to acquire doctorates in mathematics from George Washington University. A few weeks passed when the three new recruits were joined by John B. Hurt a native American with a very rare expertise in the Japanese language. The number including the secretary reached a total of seven when Friedman appointed Harry Lawrence Clark as an assistant cryptographic clerk. During the next seven peacetime years the number of staff remained more or less constant but with war beginning to loom on the horizon from 1937 the figures began to expand dramatically.³³⁰ Come Pearl Harbour the SIS employed 331 personnel in a variety of functions. The numbers continued to grow and in 1942 the SIS moved its operations from Washington to Arlington Hall in Virginia. During the war years it underwent a series of name changes. In 1942 the SIS was variously renamed Signal Intelligence Division, Signal Security Branch, Signal Security Division, Signal Security Service and from July 1943 to September 1945 Signal Security Agency. By the end of the war its numbers had grown to a total of 10,371 with an additional 17,000 Army personnel engaged in other signal intelligence activities.³³¹

The early beginnings of the SIS however were shrouded in obscurity and secrecy, as was the life and achievements of its cipher expert Frank B. Rowlett the man who began his cryptologic life as its very first assistant to William F. Friedman, who in the decades that followed, rose to the very top of the cryptologic establishment serving with the CIA and eventually replacing his mentor Friedman as Special Assistant to the Director of the National Security Agency (NSA). Until recently little was known about Rowlett. This began to change when in 1988 the US government withdrew its objections to the publication of his personal memoir which was afterwards issued by Aegean Park Press entitled *The Story of Magic Memoirs of an American Cryptologic Pioneer*. Its valuable foreword by Kahn sets the scene for a man whose important and dramatic role in the grand cryptologic play of life, which had necessarily for the most part remained invisible to all but a secret few, was at last now beginning to emerge from the shadows into the light:

FRANK ROWLETT LIVED his life in shadow. His work as a codebreaker was done in deepest secrecy. His exploits remained unknown to all but a few. His great triumph, as the leader of the team that broke the Japanese PURPLE diplomatic cipher machine, was obscured when his boss William F. Friedman, became known as "The Man Who Broke Purple." His \$100,000 Congressional award for cryptographic inventions was barely mentioned in the press. His award of the National Security Medal by President Lyndon Johnson in person was little noted.

Yet Rowlett is one of the key figures of American cryptology. Though he followed in the footsteps of Friedman, his older, pathbreaking mentor and boss, he made great contributions of his own. His PURPLE solution helped Allied troops lodge themselves in Normandy. His cryptographic inventions, particularly the idea of using keying rotors to irregularize the rotation of enciphering and deciphering rotors, rendered high-level American secrets invulnerable. He organized and inspired hundreds of World War II draftees in cracking Japanese army codes. His work saved thousands of lives. His administration put U.S. cryptology on a sound and efficient basis.

But his story has never been publicly told. Now, at last, the U.S. government has withdrawn its objections to the publication of the memoir he set down a decade or two ago, and Aegean Park Press is issuing it.

It is a fundamental contribution to the history of American cryptology. Nothing like it has been written, and nothing like it will be: The other persons involved are all deceased, and the

documents in the archives do not record the personalities, the anecdotes, the human reasons behind many decisions, as recounted here.

....For some reason, Rowlett stopped his memoir *in medias res*. It could not be published truncated thus. With the approval of the author, and on the bases of his oral history interview with National Security Agency historians, though it has been heavily redacted, and of newly available documents, I have sought to round out this work. The author has read and approved my supplement.

In this wonderful book-revelatory and well written-Frank Rowlett has told the story of the morning of American cryptology. It brings the man who lived in shadow into the sunlight. It deserves to be read not only by historians of cryptology, but also by historians of intelligence, of war-and of America.³³²

The first page of the foreword is revealing in more ways than one. It will be observed that this page commences with a large capital **F** commencing the three opening words printed in block capitals [**F**] 'RANK ROWLETT LIVED'. The large capital **F** has been deliberately and specially designed to cover two lines similar to the device used by Bacon in his Shakespeare poem *The Rape of Lucrece* where the first two lines also commence with a large capital **F** stretching across the first two lines incorporating the capital letters **R** and **B** indicating **FR**[ancis] **B**[acon]. In the foreword the large capital **F** has the effect of indenting the first word 'was' of the second line thus the letter **b** of the word 'but' falls directly under the large capital **F**: [**F**]rancis **B**[acon]. The first line has 36 ordinary roman letters and 3 words in block capitals: $36-3=33$ Bacon in simple cipher and conversely $36+3=39$ F. Bacon in simple cipher. Within the large capital **F** there are a total of 106 letters which minus the 3 words printed in block capitals: $106-3=103$ Shakespeare in simple cipher. The first two lines can now be construed as 'FRANCIS BACON LIVED his life in shadow. His work as a codebreaker was done in deepest secrecy. His exploits including his secret authorship of the Shakespeare works remained unknown to all but a few.' The second and third lines of the second paragraph reverse the process. Here the first line is indented in the ordinary way to denote a new paragraph. The second and third lines which start in the normal place at the side of the page begin with the word 'followed and 'boss', again providing the initials **FB** for Francis Bacon. Furthermore, in the first paragraph is the number 100,000 which when the 3 nulls (000) are dropped it leaves 100 Francis Bacon in simple cipher. The first paragraph contains a total of 87 words plus 16 block capital letters ('RANK ROWLETT LIVED'): $87+16=103$ Shakespeare in simple cipher. The concealed message thus reads Francis Bacon is Shakespeare.

It should also be seen that in the opening paragraph the word PURPLE is printed in block capitals and the 5 words "The Man Who Broke Purple" are placed in quotation marks with PURPLE again printed in block capitals in the second paragraph. With RANK ROWLETT LIVED PURPLE, PURPLE (the large F is different in size to the ordinary block capital letters) produce a total of 28 block capital letters that added to the 5 words in the quotation marks "The Man Who Broke Purple": $28+5=33$ Bacon in simple cipher. In the second paragraph minus the word PURPLE there remains a total of 100 words (all letters signify words and are counted as such): 100 Francis Bacon in simple cipher. The final 3 paragraphs on the page contain a sum total of 160 words: $160-3=157$ Fra Rosicrosse in simple cipher.

The whole page contains 32 lines of printed text headed by the word FOREWORD: $32+1=33$ Bacon in simple cipher and likewise the 32 lines of the printed text plus the 1 printed line for the page number (ix): $32+1=33$ again Bacon in simple cipher. The text itself comprises a total of 348 words which plus the number 9 expressed in roman

numerals (ix): 348+9=357 a triple cipher for Francis Bacon (100)/Francis Bacon (100) Fra Rosicrosse (157) in simple cipher.

FOREWORD

F.RANK ROWLETT LIVED his life in shadow. His work as a codebreaker was done in deepest secrecy. His exploits remained unknown to all but a few. His great triumph, as the leader of the team that broke the Japanese PURPLE diplomatic cipher machine, was obscured when his boss, William F. Friedman, became known as "The Man Who Broke Purple." His \$100,000 Congressional award for cryptographic inventions was barely mentioned in the press. His award of the National Security Medal by President Lyndon Johnson in person was little noted.

Yet Rowlett is one of the key figures of American cryptology. Though he followed in the footsteps of Friedman, his older, pathbreaking mentor and boss, he made great contributions of his own. His PURPLE solution helped Allied troops lodge themselves in Normandy. His cryptographic inventions, particularly the idea of using keying rotors to irregularize the rotation of enciphering and deciphering rotors, rendered high-level American secrets invulnerable. He organized and inspired hundreds of World War II draftees in cracking Japanese army codes. His work saved thousands of lives. His administration put U.S. cryptology on a sound and efficient basis.

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Through the eyes of a major participant, this book tells how, after the State Department withdrew its funding from Herbert O. Yardley's joint Army-State American Black Chamber, effectively abolishing it, the United States Army went beyond Yardley to build a modern, mathematical cryptologic unit — except for Poland's, the only agency on such a basis in the world. This basis was needed because, in a worldwide shift, cryptography

Fig. 44 The Foreword page written by David Kahn to *The Story of Magic* by Frank B. Rowlett containing Baconian-Rosicrucian ciphers

The long and illustrious career of the man who lived all his life in the shadow began on 1st April 1930 when Frank B. Rowlett stood outside the Munitions Building in Washington DC with a letter telling him to report to Room 3406. On entering the building Rowlett was about to take up his employment as a junior cryptanalyst in the Signal Service in the Office of the Chief Signal Officer at the War Department to work under the legendary William F. Friedman. Little did he know it then but once he entered into this secretive world there would be no turning back. The green graduate up from Virginia, who by his own account, knew virtually nothing about cryptology was on the verge of entering a secret world little known outside of government Black Chambers without a map not knowing where it would finally take him. When Rowlett entered Room 3406 he was welcomed by the secretary who told him they had been expecting him. After a brief exchange with the Chief Clerk for the Office of the Chief Signal Officer, a Mrs Kuntz began processing the soon to be new employee. As is usual with government appointees there was the routine round of form filling. With the bureaucratic formalities completed there was only one more thing for him to do 'She (Mrs Kuntz) took me to Mrs Leahy's desk and said, "Mr. Rowlett is ready to be sworn in." Mrs Leahy said, "Please raise your right hand and repeat after me the oath of employment." He was now an official employee of the Office of the Chief Signal Officer.³³³

Rowlett was taken by the Chief Clerk to another room to meet Major Crawford in the office he shared with William F. Friedman. After a polite chat Crawford departed for an official engagement leaving Rowlett alone in the office waiting for the arrival of Friedman who was on his way back from a meeting at the office of the Adjunct General. A nervous but inquisitive Rowlett scanned the room. His panoramic scrutiny eventually reached the fourth wall: 'The fourth wall was the most interesting; in its middle a large steel door with a combination lock was mounted. The door was closed. I wondered what might be behind it, for it was the most formidable door I had ever seen outside of a bank vault.'³³⁴ As he would discover later it was not money which lay behind the thickened steel door, but something much more valuable, top secret files containing classified information and priceless cryptologic knowledge which would in the years ahead profoundly contribute to the military and political shape of whole continents and achieve for the American government a cryptologic hegemony over the rest of the world that she still enjoys to the present day.

Awed by his new surroundings Rowlett 'did not dare get up and walk about the room'. Another half an hour passed and in walked the man he was to work under and with for the next thirty odd years 'I'm Friedman. Welcome to the Signal Intelligence Section of the Army Signal Corps.'³³⁵ His new boss apologised for not being there to welcome him and explained his delay. On the first day of each month Friedman was required as the designated official representative of the Chief Signal Office to attend a scheduled meeting in the State, War, and Navy Building at the Adjunct General's office. Major Crawford, whom you met earlier, Friedman continued, is our chief who reports directly to the Chief Signal Officer, and I, as chief of the Signal Intelligence Section report to Major Crawford:

Friedman's remarks had little meaning for me. I did not know who the Chief Signal Officer was, I had never heard of the Signal Intelligence Section before, and no one had offered to tell me what a Junior Cryptanalyst was supposed to do. I was tired of being mystified, and I thought that the time had arrived to do something about it.

"Mr. Friedman," I asked, "could you please tell me what a Junior Cryptanalyst is supposed to do?"

My direct question seemed to take him by surprise. He looked at me quite curiously as if he might be thinking that I should have known this before I accepted the job. After a slight hesitation he asked, "Why do you ask that question?"

"I've asked several people, both down in Virginia and here in Washington, about the duties of a Junior Cryptanalyst, and not one of them knew. I have tried to find a definition of the work 'cryptanalyst' in several dictionaries, but not one of them lists it. Frankly, I am puzzled and curious, and I would like to have some idea of the kind of work I will be doing."

My answer amused Friedman. He smiled and said, "I suppose you are puzzled. I suspect that there are only a very few persons who might know what the word 'cryptanalyst' means. In fact, the words cryptanalyst and cryptanalysis were officially adopted by the War Department only a few weeks ago, although I started using them several years ago. The first official use of these words was in the description of the duties of the staff of the Signal Intelligence Section, and you have the honor of being the first individual to be employed by the U.S. government as a Junior Cryptanalyst. By the way, are you familiar with the works of Edgar Allen Poe?"

"Yes" I replied, puzzled by this question.

"Do you recall his story about the Gold Bug?" he asked.

For the first time the light began to dawn. "Do you mean the story of how a cipher was broken?" I asked.

Friedman seemed pleased at my answer. "Yes, that is the one," he said. "Now in our terminology, the secret writing described by Poe is called a cryptogram; and one who solves cryptograms is a cryptanalyst. In other words, a cryptanalyst is one who reads code messages or cryptograms without knowledge of the keys or the means used to disguise their plaintexts. We are going to train you to be a cryptanalyst. Have you ever tried to solve a code message?"

"Outside of reading the story by Poe, I have never given any thought to breaking code messages," I answered. "I have read that many governments use codes to protect their secrets, but I know nothing about codes or how they are used."

"We will soon change that," Friedman said. "I have prepared a special course of study for you and the other young men we are expecting. As soon as they arrive, your training will start. Meanwhile, I think you should look over what little has been written about cryptography and cryptanalysis and acquaint yourself with some of the basic information on these subjects. Unfortunately, the best books are not in English. Please wait here while I get some examples of the books we have in our collection."³³⁶

With that Friedman walked over to the vault door that had earlier engaged Rowlett's attention 'Positioning his body so it blocked my view of the combination dial, he unlocked the door and opened it.'³³⁷ Beyond the steel door, observed Rowlett, was a second barrier of two steel panels which met in the centre of the door way. With another key Friedman unlocked the panels and disappeared into the area behind them. He returned a short while later carrying four books "I recall that your language is German. . .I have here two books in German which I think are the best ones written in that language on cryptography. I have also two books by French experts which are more up to date than the books in German."³³⁸ This marked the beginning of the cryptologic education of the most decorated (with Friedman) American cryptologist of the twentieth century.

With a clearer idea of what the duties of a Junior Cryptanalyst entailed Rowlett started to get to grips with the daunting task of familiarising himself with the work of the German cipher expert Kasiski and a more recent work by the Austrian military officer Andreas Figl. A week passed before Rowlett would learn another important lesson, perhaps the most important lesson, of the world he had now entered. 'I got my first introduction to the need for secrecy about my work on Monday morning when Major Crawford came into the office carrying a newspaper.'³³⁹ Crawford turned to Rowlett and asked him if he had seen the article on codes and ciphers in yesterday's

copy of the *Washington Sunday Star*. He replied he had read the article. Continuing the conversation Major Crawford said “it is remarkable just how many individuals are fascinated by cryptography, yet there are only a very few persons in this country who really know anything about the subject. This article in the Sunday Star is only a superficial treatment and is hardly worth the paper it is printed on. But if one of these feature writers learned of our plans to establish a cryptanalytic group in the Office of the Chief Signal Officer, he could turn out an article which would attract a lot of attention throughout the world. Such widespread attention to what we are planning would certainly be to our disadvantage. I think that Billy [Friedman] and I need to work out some plans for ensuring that knowledge of your group is carefully held within the Signal Corps and certainly kept out of the newspapers or any other form of the press.”³⁴⁰

Friedman entered the room and joined in the discussion. Friedman asked Rowlett “what do you normally say to your cousin and your friends when they questioned you about your work? “I tell them I am a cryptanalyst”, he answered, “And if they persist in asking you further questions, what else do you tell them,” to which Rowlett replied “So far I have not been able to tell them anything, except that when they ask me what a cryptanalyst does, I answer that he works with codes and ciphers. I am not able to tell them any more for that is about all I know about it myself.”³⁴¹ Crawford turned to Friedman and said he was concerned each member of the group was quite naturally going to be asked questions about the nature of their work. He suggested that rather than each of them formulate their own responses members of the group should be provided with proper guidelines of what not to discuss outside the walls of the office. The implications of not taking precautions were obvious “when he [Rowlett] and the other members of the group become more deeply involved in the duties we have planned for them, we could find that an embarrassing situation has developed.”³⁴² They agreed that under no circumstances should Rowlett reveal even the existence of the secret unit and consequently nor was he to discuss any detail of his work “And above all, he should avoid any discussion of his duties with representatives of the press.”³⁴³

And in accordance with the kind of instructions which echoed those given to those newly admitted into the ranks of the Rosicrucian-Freemasonic Brotherhood Crawford turned to Friedman and said “because he will inevitably be questioned by his friends, we should provide him in advance with answers which will satisfy the questioner without stimulating further curiosity. For example, if Rowlett indicates that he is not allowed to discuss the nature of his duties or the type of work he is doing, he will only encourage the questioner to become more curious and thereby generate more embarrassing questions.”³⁴⁴ To which Friedman, a master in the art of deception and deceit, replied “I agree” before stating that,

Since all the members of the group have been selected from the Junior Mathematicians Register of the Civil Service Commission, they could state, when pressed by a questioner, that they are conducting a statistical analysis of War Department communications. But under no circumstances should they give any indication that they are being trained as cryptanalysts, or that they have anything at all to do with codes and ciphers. In fact, I think we ought to instruct each member of the group to deny any knowledge of cryptography or cryptanalysis in case a direct question of that sort is put to them.”³⁴⁵

While waiting for Sinkov and Kullback to report for duty, Friedman told Rowlett he should immediately start the training programme and begin work on some of the extension courses on cryptography. He selected out of the vault his own work on

military cryptanalysis and handed Rowlett a copy for his perusal. He then turned to Crawford and said “Since he [Rowlett] eventually will be studying and working in the vault, I think he should start occupying it today.”³⁴⁶ A suggestion to which Crawford agreed “but we should make it clear to him that he is not to have access to the file cabinets that are now stored in the vault.”³⁴⁷ He instructed Friedman to unlock the vault and “show him what parts of it are off limits to him.”³⁴⁸ On entering Rowlett saw that almost half of the vault was filled with filing cabinets and near the window there were two large tables “Crawford took me by the arm and, pointing to the area containing the file cabinets, addressed me in a very serious tone of voice.”³⁴⁹ He stated “These cabinets and the space they occupy are off limits to you. You can study and work at the tables, but you are to stay out of the area where those files are located. Under no circumstances are you to open the files or examine their contents. Do you understand me, Mr. Rowlett?”³⁵⁰ Before leaving the vault Crawford again turned to Rowlett “Young man, I’ll have you shot next morning at sunrise if I catch you near those file cabinets.”³⁵¹

With Major Crawford departed Friedman handed Rowlett a copy of Special Text No.165 for him to get to work on his first assignment at one of the tables near the window. After explaining to Rowlett what was required of him for his first lesson Friedman then got up and left the vault “I satisfied my curiosity about the vault by looking it over carefully from the table at which I was sitting. After Major Crawford’s remarks, I was not about to get close to the forbidden area.”³⁵² Rowlett spent his time working through the exercises of Special Text No. 165. On completing it Friedman gave him a copy of the Signal Corps Training Pamphlet which contained information on the clerical processes involved in preparing messages for electrical transmission. “You should study it very carefully, especially the section which explains how the letters of the alphabet are to be printed.”³⁵³ As instructed Rowlett carefully read the training pamphlet practising “the exercises in printing which Friedman had pointed out to me. These exercises were accompanied by diagrams indicating how each stroke of the pencil should be made in printing each of the letters of the alphabet by hand.”³⁵⁴ After Rowlett had worked through the assignments set down for him Friedman handed him a typewritten manuscript draft of Special Text No.166 *Advanced Military Cryptography* containing more advanced and complex substitution and transposition ciphers. As instructive as these special manuals were Rowlett said they contained no information on cryptanalysis an area for which he was eager to get started on.³⁵⁵

He did not have to wait too long as his next assignment required him to study and complete Signal Corps Training Pamphlet Number 3 *Elements of Cryptanalysis* that was written by Friedman himself. By this time Rowlett had been joined by Sinkov and Kullback. While waiting for both Sinkov and Kullback to finish their assignments Friedman gave Rowlett a selected number of Riverbank publications for study:

“Here is a selected sampling of the Riverbank Publications,” he told us. “These documents were prepared at the Riverbank Laboratories in Illinois while I was employed by Colonel George Fabyan as a researcher....While I was working for him in the field of plant genetics, he became interested in the controversy being played up in the press at that time over the authorship of Shakespeare’s plays. We were discussing this subject at lunch one day, and I made the remark that the matter might best be settled by the application of scientific disciplines to the analysis of the manuscripts.

“Much to my surprise Fabyan on the spot assigned me to the task of undertaking a scientific study of the question and directed me to drop my other research and to start work on it immediately. As a result of this assignment, I had to make a comprehensive study of the field of codes and ciphers, referring to all the available sources for information on the subject and

its related fields. He encouraged me to document my research, and I prepared several papers on the subject which were published as reports of the Riverbank Laboratories. I have selected some of these reports for you to read now; the remaining ones will be used as supplementary texts in your special training course and they will be issued to you at the appropriate time.”³⁵⁶

Rowlett goes on to say that he had never heard of the Shakespeare controversy. By the Shakespeare controversy Friedman actually means that for more than half a century there had been an enormous output of works, written in English, French, German, Italian and Dutch by intellectuals, historians, professors, various scholars of different disciplines, writers, professional and amateur cryptologists and various other like-minded enthusiasts that claimed Bacon wrote the Shakespeare works. Following his comments about Colonel Fabyan, Riverbank and the cipher publications written by Friedman, the subject proceeded to specifically focus on Bacon and the authorship of the Shakespeare poems and plays, regarding which Friedman did what he always did: he dissembled and lied:

I had never before heard of any controversy about the authorship of Shakespeare’s plays, and I wanted to learn more about the matter.

“What was the outcome of your research?” I asked.

“While I was working at the Riverbank Laboratories, we never really completed the task we had set for ourselves,” he explained. “On one of his visits to Washington, Colonel Fabyan discovered that the War Department was in need of experts in codes and ciphers, and he sent me to Washington to assist Military Intelligence in this field. After the war began I was commissioned as a Military Intelligence officer and sent to France to work with the French unit responsible for breaking German field ciphers. After the war, I returned to Riverbank. Later, I came back to Washington to work in the Office of the Chief Signal Officer. Since I have been employed by the government, I have not been able to devote any time to the Shakespearean controversy. However, our work at Riverbank did show that there was little if any validity for the claim that Bacon was the author of the Shakespearean plays, and in fact, we showed that many of the contentions of those who argued that Bacon was the author were without foundation.”³⁵⁷

This carefully worded and studiously structured passage requires very close attention. In the last part of the passage it is stated by Friedman “our work” (the Friedmans and Riverbank Cipher Department) showed there was “little if any validity” in the claim Bacon wrote the Shakespeare works; reinforced by the more emphatic “in fact, we showed” that “many of the contentions” (the phrase is non-specific) of those who claimed Francis Bacon wrote Shakespeare “were without foundation.” In accordance with the most benign interpretation, these statements are extremely misleading and at worst a deliberate falsification. As we have seen, the Riverbank cipher publications have been divided into two categories: works described as technical monographs and a number of ‘Baconian’ publications which analyse and discuss the Bacon Bi-literal Cipher, and only this. In other words the only known work the Friedman’s carried out at Riverbank regarding the claim that Bacon wrote Shakespeare was only related and totally confined to the bi-literal cipher. There is not a single statement in any of the Baconian Riverbank publications which in any way whatsoever shows or attempts to show there was little if any validity in the claim Bacon wrote Shakespeare, nor for that matter any specific statement or reference however slight relating to the “many” other unspecified “contentions” made by Baconians which were without “foundation”. Thus these statements made by Friedman, as they are related by Rowlett, are utterly and completely false. In fact we will do well to remind ourselves of the statements made in the prefatory note to the anonymous *The Keys for Deciphering The Greatest*

Work of Sir Francis Bacon printed in 1916 by Riverbank Laboratories (as we have seen secretly written by Friedman) where all the photographs therein are signed 'Wm. Friedman' at a time when Friedman was head of the Riverbank Cipher Department:

...the Biliteral Cipher of Sir Francis Bacon as described in his *De Augmentis Scientiarum* is present in certain works published in the Elizabethan period, and that its presence is susceptible of demonstration to anyone with a mind trained to scholarly investigation, and with the ordinary powers of observation.

...Most of the work so far accomplished by Riverbank Laboratories has been confined to the cipher described by Sir Francis Bacon in his *Advancement of Learning* and called by him the "Biliteral Cipher," and which has been tested and dissected until now its presence in certain works is demonstrable beyond any doubt.³⁵⁸

The Story of Magic a work about cryptography by Frank B. Rowlett, with Friedman, the most decorated cryptographer in US history, is rounded out with an 'Epilogue' written by David Kahn. The last full page of this work falls on page 257: Francis Bacon (100)/Fra Rosicrosse (157) in simple cipher i.e., Francis Bacon, Brother of the Rosy Cross, is the secret concealed author of the Shakespeare works.

There are a number of other classified publications on cryptology and intelligence which contain concealed cryptographic messages pertaining to Bacon's authorship of the Shakespeare works. The three volume *The Historical Background of the Signal Intelligence Agency* by Theodore W. Richards was as stated on its title page 'Prepared under the Direction of the ASSISTANT CHIEF OF STAFF, G-2 12 April 1946' for the 'United States Army Security Agency. Washington, DC'. Its author Professor Richards, America's first Nobel laureate in chemistry, had previously headed up the Secret Ink Subsection in MI-8. The top secret work remained classified until it was 'Declassified per Sec. 5, E. O. 11652 by Director, NSA/Chief, CSS, Date: 14 Mar '77'.³⁵⁹ This top secret classified three-volume history commissioned by the Army Security Agency, predecessor of the National Security Agency, was written in 1946 for internal use by army intelligence personnel. The work has never been on public sale.

The first volume is divided into six sections under the heading 'Volume One: Codes and Ciphers prior to World War 1' with each section divided into a varying number of sub-sections. The first section examines and discusses the code and cipher systems of 'The American Systems in the Revolutionary Period' a pattern repeated for 'The British Systems in the Revolution'; 'The Federal Systems in the Civil War'; 'The Confederate Systems in the Civil War'; 'A Diplomatic System in the Civil War Period'; and 'Cryptographic Progress 1865-1917'. In the second volume of the work Professor Richards devotes six pages to a discussion of the 'Riverbank Laboratories'.

In its brief preceding chapter 'The Founding of the Cipher Bureau' leading up to the Riverbank Laboratories Professor Richards states 'The entry of the United States into World War 1 on 6 April 1917 found the army ill-prepared both cryptographically and cryptanalytically to meet the great demands which immediately faced it.'³⁶⁰ The great responsibility for forming an organization to meet the pressing requirements of the War Department for the solution of intercepted cryptographic material fell to Major Van Deman, who later acquired the accolade 'Father of Military Intelligence'.³⁶¹ On entering the war the US was ill-prepared and the War Department 'was forced to rely for cryptanalytic assistance at least for a time, on the volunteer efforts of a group of patriotic civilians. The fact that a major war had already been raging in Europe for nearly three years had apparently not much accelerated military preparations: Indeed, the policies of the Administration prior to 1917 had been based on strict neutrality, a

view which in those days evidently pervaded the War Department as well as public opinion'³⁶² In the following section 'The Riverbank Laboratories' Professor Richards explains that to remedy the situation an offer was received from 'an institution known as Riverbank Laboratories', staffed with scholars and scientists engaged in genetics and cryptography. In the Riverbank Department of Ciphers was William F. Friedman and Elizebeth Smith, soon to be Elizebeth Friedman.³⁶³ In addition to the Friedmans Professor Richards in passing refers to Dr J. A. Powell, formerly of the University of Chicago Press, but for some reasons he fails to mention that Dr Powell while working at Riverbank wrote *The Greatest Work of Sir Francis Bacon* (Riverbank Laboratories, 1916) endorsing the Bacon Bi-literal Cipher and its decipherment by Elizabeth Wells Gallup before proceeding to state:

The Department of Ciphers had been organized as an attempt to apply scientific procedures to the Shakespeare-Bacon problem. It was believed by Colonel Fabyan that in certain works of the late sixteenth and early seventeenth centuries there might be found a bilateral cipher which would afford proof that Francis Bacon, Lord, Verulam, was the author of the plays commonly attributed to William Shakespeare. No scientific results were obtained in this direction, but it was the good fortune of the Government that the staff at Riverbank was then engaged in cryptographic processes and also trained in the rigid techniques used in scientific research.³⁶⁴

In the remainder of this section Professor Richards briefly focused on an outline of the achievements of the Riverbank Cipher Department:

The achievements of the Riverbank staff were threefold:

- a. Intercepted materials were submitted for solution to the experts there by various departments of the Government until the Cipher Bureau was well established in the fall of 1917.
- b. A vigorous training program was inaugurated at Riverbank under the auspices of the War Department. A group of four officers was trained in cryptography for six weeks in October-November 1917; a second group of some sixty officers was trained in January-February 1918; while the third, and last, group, consisting of seven or eight, was trained in March-April 1918. Mr. Friedman prepared the instructional material, gave the lectures, and directed the school, the first of its kind in American history.
- c. Research was conducted in the theory of cryptanalysis and an extensive series of technical papers was published by the Laboratories. Most of these were by Mr. Friedman...³⁶⁵

There follows a detailed list of the technical monographs published by the Riverbank Laboratories, mostly written by Friedman. In this very carefully worded section only one single paragraph refers to the Baconian ciphers. Even though Professor Richards has more than one occasion to refer to Dr Powell, he fails to point out the salient fact he authored *The Greatest Work of Sir Francis Bacon*, and while he lists the technical monographs he makes no mention whatsoever of the Baconian publications issued by Riverbank Cipher Department. In fact, remarkably he even fails to mention its cipher department issued several works on Bacon Bi-literal Cipher, all of them endorsing it. But while the plain text single paragraph on the Baconian-Shakespeare authorship says one thing on the surface it conceals a very important piece of cipher information. The single paragraph in which Bacon is mentioned has 103 words: 103 Shakespeare in simple cipher, secretly revealing the concealed message that Bacon is Shakespeare.

More extensive use of secret Baconian-Rosicrucian ciphers is found in another work commissioned by the US government and military intelligence. In 1952 the Military

In addition to these two persons, mention should be made of Dr. J. A. Powell, formerly director of the University of Chicago Press, and of Dr. John Matthews Manly, at that time and until his death in 1940 Professor of English and Head of the Department at the University of Chicago. Professor Manly, though not a member of the staff of Riverbank Laboratories, was in close contact with the work there and was regarded for many years as a leading authority on literary ciphers.

The Department of Ciphers had been organized as an attempt to apply scientific procedures to the Shakespeare-Bacon problem. It was believed by Colonel Fabyan that in certain works of the late sixteenth and early seventeenth centuries there might be found a biliteral cipher which would afford proof that Francis Bacon, Lord Verulam, was the author of the plays commonly attributed to William Shakespeare. No scientific results were obtained in this direction, but it was the good fortune of the Government that the staff at Riverbank was then engaged in cryptographic processes and also trained in the rigid techniques used in scientific research.

The claim is made by Yardley⁶ that the "search for this cipher had given Mr. Fabyan's staff no real experience even in the elements of cryptography," a judgement certainly unjust to the Riverbank experts. It is true that they could have had no experience at all in current military traffic, since at that time, even within the Army itself,

6. Yardley, *Achievements*, 7. He makes no mention of Riverbank in *The American Black Chamber*.

words

11
1012
11
11

10

11
12
114
103

010-008

Fig. 45 Page 4 from the TOP SECRET declassified *Historical Background of the Signal Security Agency* concealing the cryptographic message Bacon is Shakespeare

Intelligence Division (Department of the Army) & Office of Military History secretly commissioned Colonel Bruce W. Bidwell to write a comprehensive history of the development of military intelligence in the US army:

[It] was designed to serve “as a text for the orientation of general officers and key personnel assigned to the G-2 Division and to intelligence officers in the field.” Colonel Bidwell was accordingly given unrestricted access to the most confidential records, and the final work was classified TOP SECRET.³⁶⁶

The top secret *History of Military Intelligence Division* was divided into eight parts. The first four parts of it were declassified prior to its publication by the University Publications of America in 1986. The Editorial Note prefixed to the beginning of the work declares ‘The current text makes available the first four parts of this informative history, with the minor exception of a few passages not yet declassified. The second four parts have not yet been declassified.’³⁶⁷ In the preface-referring to himself in the third person-Colonel Bidwell states:

Authoritative historical documentation covering the field of military intelligence has been seriously neglected, not only for security reasons but also due to the wide complexities and controversial features of the subject. Both the departmental intelligence authorities and the official Army historians have consistently seemed unable to work out a mutually satisfactory approach to the problem, wherein qualified personnel might first be procured for the purpose and then given unrestricted access to the most confidential intelligence records....

The present project represents a determined effort to arrive at an effective solution to this troublesome problem, as personally agreed upon early in October 1952 between Maj. Gen. R. C. Partridge, Assistant Chief of Staff, G-2, and Maj. Gen. Orlando Ward, Chief of Military History. Their agreement resulted in the issuance of a formal directive, dated 14 October 1952, to Col. Bruce W. Bidwell, Inf., U. S. A., for him to write a “History of the Military Intelligence Division, Department of the Army General Staff,” to serve “as a text for the orientation of general officers and of key personnel assigned to the G-2 Division and to intelligence officers in the field.” The final work would be classified TOP SECRET.³⁶⁸

As with *The Historical Background of the Signal Security Agency* Colonel Bidwell makes mention of the Riverbank Laboratories, and in one passage, and one passage only, he refers to Francis Bacon and William Shakespeare:

While there were a few Signal Corps officers who had come to be regarded as more or less expert within the highly specialised field of military codes and ciphers, they were already performing important war duties and none of them could be spared for assignment to the departmental intelligence agency. The army was already in touch, however, with Mr. George Fabyan, who for some time had been privately maintaining a group of civilians at his “Riverbank Laboratories” in Geneva, Ill., for the purpose of seeking to prove the existence of a Francis Bacon cipher in the works of William Shakespeare. Accordingly, it was soon decided to send two selected members of Mr. Fabyan’s staff to the Army Service School at Fort Leavenworth, Kansas, to undergo a course in military cryptography which was being offered there by Signal Corps instructors. These same two men, William F. Friedman and J. A. Powell, were then subsequently utilized to provide similar instruction in military cryptography to a considerable number of Army officers at the laboratory in Geneva.³⁶⁹

The above paragraph is found on page 166. It has been carefully constructed to ensure that the 100th word falls on the pseudonym Shakespeare: 100 Francis Bacon in simple cipher. The header at the top of page 166 reads ‘166/*World War I (1917-1919)*’: The sum total of the page number 166, plus the 2 words, and 9 numbers: 166+2+9=177

William Shakespeare in simple cipher and conversely $166-9=157$ Fra Rosicrosse in simple cipher. All the numbers added together $1+1+9+1+7+1+9+1+9=39$ F. Bacon in simple cipher. Thus the secret cipher message reads F. Bacon, Brother of the Rosy Cross is the concealed author of the Shakespeare works.

The title page of the declassified *History of Military Intelligence Division* contains 25 words and 8 numbers $25+8=33$ Bacon in simple cipher. There are 100 letters in the top half of the title page: 100 Francis Bacon in simple cipher. If the aforementioned total of 33 is added to the 34 letters at the bottom of the page: $33+34=67$ Francis in simpler cipher. The 100 letters in the top half of the title page added to the count of 67: $100/67$ provides a split simple cipher Francis Bacon (100)/Francis (67). The title page contains a sum total of 134 letters, 8 numbers, and the addition of these numbers $1+7+7+5+1+9+4+1=35$: $134+8+35=177$ William Shakespeare in simple cipher.

On the Table of Contents there is an entry for chapter XI which commences on page 103 Shakespeare in simple cipher: 'Chapter XI. Summary and Conclusions, 103'.³⁷⁰ The entry contains a total 33 letters and digits: 33 Bacon in simple cipher-thus it reads Bacon is Shakespeare.

The last page of the text (page 526) finishes with a two lines printed in italics which form the last words on the page.

*The Fates are just; they give us but our own;
Nemesis ripens what our hands have sown.*³⁷¹

The second or final line has 33 letters Bacon in simple cipher. The whole citation has 67 letters Francis in simple cipher.

In the Index the only entry under Shakespeare reads 'Shakespeare, William Fabyan language studies, 166' containing a total of 39 letters F. Bacon in simple cipher. The number 166 added to the 39 letters: $166+39=205$ minus the 5 words provides a total of 200 a double cipher for Francis Bacon (100)/Francis Bacon (100) in simple cipher. The total of 200 added to the 3 numbers: $200+3=203$ a split cipher for Francis Bacon (100)/Shakespeare (103) in simple cipher.³⁷²

Early one morning in June 1930 the three recruits Rowlett, Sinkov and Kullback were busy working away in the vault when in walked Friedman with a business like serious air about him. He asked all three men to accompany him to the G-2 area of the Munitions Building. From Friedman's attitude, wrote Rowlett, he sensed this was 'to be a very special sort of mission.'³⁷³ Friedman and his disciples set off down the stairs to the second floor until they reached the intersecting corridor of the seventh wing where Friedman abruptly came to a halt in front of a steel door. Taking a small card from his coat pocket he started to rotate the combination lock on the front of the door. With the combination device disarmed Friedman withdrew the bolt and swung open the door only to reveal a second steel door behind it. He produced a key from his pocket and unlocked the second door 'which he opened with a flourish.' Setting foot into the dark space Friedman lit a match to look for the light switch and turned on the light. Outside the door stood his three excited Junior Cryptanalysts awaiting his instructions 'He came back to the vault door, peered up and down the corridor, and then waved us inside the vault.'³⁷⁴ Inside the secret chamber an earnest Friedman turned toward his captivated charges and in a 'solemn and very imposing manner' said 'Welcome, gentlemen, to the secret archives of the American Black Chamber.'³⁷⁵

Not unsurprisingly, Rowlett recounted how puzzled he was by the seriousness with which Friedman had made his announcement. As with Sinkov and Kullback he had never heard of the American Black Chamber. This was still the summer of 1930 and

Letters

Word &
numbers

12

28

19

12

13

16
100

34

History of the Military Intelligence Division, Department of the Army General Staff: 1775-1941

Bruce W. Bidwell
Colonel, U.S. Army (Ret.)

University Publications of America, Inc.

3

3

4

2 8

3

5

5

33

Fig. 46 The title page of the TOP SECRET declassified *History of the Military Division* replete with Baconian-Rosicrucian ciphers

Yardley had still to unload his bombshell on the American public and the rest of the world at large. Before the publication of his explosive expose there were only a very few highly placed individuals at the heart of the American administration who knew of the secret existence of the Black Chamber; but Rowlett, Sinkov and Kullback were now part of this secret world themselves and it was understood that most of what they would learn now and in the future was just that, secret, and not to be divulged to the American public or the rest of the world. This, they knew, was the price they paid for the secret society/world they had entered into, a lesson long absorbed by their Grand Master of Cryptology, William F. Friedman.

Not wanting to disappoint Friedman the three recruits played their parts well said nothing and did their level best to look as impressed as they could.³⁷⁶ With the stage set perhaps like something out of a Shakespeare play it was now ‘time to tell them the secret’ and ‘Like a sorcerer instructing his disciples on the mystic path to eternal life, Friedman began his introduction into the shadowy history of American cryptology.’³⁷⁷ Friedman first explained that the fortified room contained the files of ‘a highly secret cryptanalytic organisation’ that for the last decade had surreptitiously operated in the ‘utmost secrecy’ in New York City before being shut down the previous summer.³⁷⁸ All the records and files of the secret American Black Chamber had been turned over to the Chief Signal Office for the use of the Signal Intelligence Service. It was their task to organise and catalogue the top secret records into some kind of working order. The Grand Master of Cryptology and Keeper of Secrets Friedman left, and his three cryptographic neophytes, launched in with unabashed relish:

We were completely hypnotized by what we were finding. Here were the secret records which dealt with the American code-breaking activity sponsored by the United States State Department and the Director of Military Intelligence, United States War Department. Here were copies of the secret codes and ciphers of many of the great nations of the world. Here were the work sheets used in breaking Japanese diplomatic codes. Here were the translations of Japanese messages relating to the negotiations of the Washington Naval Conference, to which were attached letters of appreciation signed by high officials of the United States government. Here were the decipherments of the German field ciphers of 1917 and 1918 with descriptions of how the cipher systems were broken. Here were hundreds of copies of unsolved code messages sent from and addressed to every important nation in the world. Here was also a wealth of other cryptologic items which could be appreciated only after hours and hours of detailed study. King Solomon’s mines could have offered no greater treasure for us.³⁷⁹

The Keeper of American Cryptographic Intelligence Secrets and the Secrets of the Baconian Bi-literal Ciphers in the Shakespeare Plays and their instructor in the black arts of deception and deceit, returned to find his three ‘sweaty and grimy, but starry-eyed’ cryptanalysts, and made a joke about “what a dirty business cryptanalysis can be”,³⁸⁰ something Friedman knew better than anyone.

A meeting was arranged for the team, including Hurt, for an important discussion on their future duties. The five of them all sat around the table in Friedman’s office in tense excitement ‘By the time he sat down behind his desk we were literally on the edges of our chairs...for me, it was the most electric moment I had yet experienced.’³⁸¹ Their Grand Master of Secrets began by relating the story of the Black Chamber or ‘Yardley’s Bureau’ as he called it. How the secret unit had been funded by the State Department and War Department G-2. How it had operated out of New York because of legal limitations imposed on the funds derived from one of its sponsors under the cover of a commercial enterprise known as the Code Compiling Code. How the new

Secretary of State Stimson had been outraged when he first learned of the existence of the Cipher Bureau and its activities and immediately ordered it shut down. Stimson had stated such activity would not be tolerated in the State Department in his tenure of office. The intelligence unit G-2 Friedman told them, had looked upon Stimson's directive as a 'major disaster to the American Intelligence effort'.³⁸²

When the Director of Military Intelligence realized he would be unable to have the order of the Secretary of State rescinded, he and the Chief Signal Officer secretly made provisions for a code-breaking operation planned for the War Department under the administration of the Chief Signal Office.³⁸³ Buried under layers of bureaucracy the necessary funds were transferred to the Chief Signal Office 'for the purpose of hiring a small group of young men who would be trained in all aspects of cryptology. It was hoped that these would become the cadre of an effective cryptanalytic organization to undertake the future production of intelligence by breaking the code messages of the other great powers of the world.'³⁸⁴

The four young cryptanalysts Rowlett, Hurt, Sinkov and Kullback 'represented the realization of the first step in the implementation of the long-range plan to develop a greatly enhanced cryptologic capability in the War Department.'³⁸⁵ The Grand Master of deception and deceit Friedman 'impressed on us the need for secrecy'.³⁸⁶ Friedman told them that the State Department was to never know of its existence. He explained that the new organization had been located in the Office of the Chief Signal Officer rather than G-2, for if by chance its existence became known to the Secretary of State, it would allow them to justify its continuation 'as being essential to the support of the officially assigned responsibilities of the Chief Signal Officer to design, compile, store, and issue all cryptographic materials required by the War Department and to supervise the use of all Army cryptographic systems.'³⁸⁷

In other words, the newly established Signal Intelligence Service raised from the ashes of the American Black Chamber, was to be kept secret from the Secretary of State and the State Department and in order to conceal its true activities it had been placed under the protective auspices of the Office of the Chief Signal Officer. In the event its existence was discovered by the State Department an official convoluted cover story would hopefully serve to confuse or satisfy State Department officials, including the Secretary of State, that the unit was nothing more than an administrative arm of the Office of the Chief Signal Officer. In short, if suspicions were aroused Friedman indicated they should, if necessary, make untrue statements they knew to be false and misleading, with the deliberate intention to deceive and misdirect, to create without compunction a false and misleading impression, to lie, lie again, and keep on lying. Something he was such a practised master of that by now Friedman simply and effortlessly lied as he breathed.

In the early years of the Signal Intelligence Service before the outbreak of war Rowlett and the rest of the team busied themselves with learning everything they could about cryptography and cryptanalysis under direction of their watchful and demanding leader Friedman. Aside from his extensive duties as head of SIS Friedman occasionally found time for some of his other interests. During these years, wrote Kahn, notwithstanding intermittent bouts of 'depression and isolationism' Friedman discussed the cryptologic prowess of Edgar Allan Poe and Jules Verne in a number of scholarly articles, investigated several historical problems including the Zimmermann telegram, and under his direction he ensured that important works were translated.³⁸⁸

Unfortunately, caught between the need for secrecy and a desire for fame, he tended to play the dog in the cryptologic manger-if he couldn't have the glory, no one else would. His usual tactic was to blacken amateur contributions, often quite worthwhile, as "unprofessional"³⁸⁹

In the event these were only minor if pleasant distractions. In the late 1930's the world was heading towards its Second World War of the century and in anticipation of the dramatically changing situation the Signal Intelligence Service had already begun to greatly expand its operations and increase its manpower. For the moment Friedman's literary aspirations would have to be placed on hold. At the same time his biographer R. W. Clark relates that with the threat of a European war looming on the horizon Washington was busy tightening up its cryptologic security:

...the authorities in Washington brought from the Riverbank Laboratories all remaining copies of Friedman's papers which had been published there. Even at this late date, so little information on the subject was available in the United States that the papers of twenty years earlier fell into the category 'of use to an enemy'.³⁹⁰

In the popular mind outside of the world of Baconian ciphers and the Shakespeare plays the name of William F. Friedman is synonymous with the legendary and almost miraculous cryptologic feat of cracking the Japanese Purple code which provided the Americans with priceless intelligence in their war effort against Japan. In 1934 the Japanese Navy had purchased a German commercial cipher machine known as the Enigma. In the years leading up to the outbreak of the Second World War the United States had given the Japan the code name Orange. American cryptanalysts had broken the Japanese machine codenamed Red sometime around 1936. When the Red cipher was abandoned in 1938 it was replaced with a more complicated machine which the Americans named Purple. The Purple machine was officially known as 97-shiki obun Injiki or the Alphabetical Typewriter '97. The seemingly invincible complexity of the machine lulled the Japanese into believing their most secret diplomatic channel would prove impervious to the listening ears of the Americans. The Japanese had clearly not reckoned with the determined brilliance of a man who thirty years earlier had almost by accident drifted into the art and science of cryptography at Riverbank Laboratories where his cryptologic instincts were originally awakened by the irresistible lure of the possibility of discovering Baconian ciphers in the Shakespeare works.

From 1938, under the leadership of Major-General Joseph O. Mauborgne, the Signal Intelligence Service began wrestling with the veritable Herculean feat of attempting to break the Purple machine. Friedman later recalled 'When the PURPLE system was first introduced it presented an extremely difficult problem on which the Chief Signal Officer [Major-General Mauborgne] asked us to direct our best efforts. After work by my associates when we were making very slow progress, the Chief Signal Officer asked me personally to take a hand. I had been engaged largely in administrative duties up to that time, so at his request, I dropped everything else that I could and began to work with the group.'³⁹¹ After eighteen months or so of seemingly endless frustration and one disappointment after another the first complete Purple message was deciphered in August 1940. Friedman later said of this milestone 'Naturally this was a collaborative, cooperative effort on the part of all the people concerned. No one person is responsible for the solution, nor is any single person to whom the major share of credit should go. As I say, it was a team, and it was only by very closely coordinated teamwork that we were able to solve it'.³⁹² The credit for this astonishing cryptologic feat which shaped the outcome of the Second World War soon coalesced and consolidated in the minds of Shakespeare scholars and the schoolmen as well as

popular opinion throughout the world in the figure of William Friedman, which was reinforced by the title of his only full-length biography misleadingly entitled *The Man Who Broke Purple*.

As James Gannon points out in his *Stealing Secrets, Telling Lies: How Spies and Codebreakers Helped Shape the Twentieth Century* (2001), a different story emerges from the memoirs of his illustrious protégé Frank B. Rowlett:

In early accounts of the Purple breakthrough, cryptological giant William F. Friedman received all the credit...but whether he deserved all the credit for Purple is an entirely different matter.

...No reasonable person could dispute that Friedman was indispensable to the solution of Purple. Not only did he hand-pick the cryptanalysts on the SIS team, he also taught them the fundamentals of codes and ciphers. He taught them so well, in fact, that his best people, including Rowlett, could handle the most complex cryptological problems on their own. From Rowlett's account-although he does not say it in so many words-Friedman is not "*the man who broke Purple*" as Friedman's biographer would have us believe, but only one person among many who had a hand in it. The Purple section did the nitty-gritty intellectual work while Friedman was otherwise occupied, and Rowlett led the charge at ground level.

Rowlett not only deserves more credit than he has received for the conquest of Purple, he is also the man who, under a blanket of government security and over initial resistance of Friedman, conceived the principles that made America's own cipher machine, called Sigaba by the army and ECM by the navy, impenetrable during World War II. His work on Purple and Sigaba saved countless (and uncountable) American lives....³⁹³

A few weeks later Friedman was admitted to Walter Reed Hospital on 4 January 1941 suffering from a nervous breakdown.³⁹⁴ Not as Gannon points out, as historians have written, because of Purple, an assault led by Rowlett and the Purple team.³⁹⁵ It might be as Gannon suggests that Friedman suffered his nervous breakdown through being overworked but he had been suffering from psychiatric problems for decades when it seems he was not at the time overloaded with work heavy commitments. There would appear to be a more likely explanation, one that by his own admission Friedman had continually battled concerning the moral ambiguities of cryptology involving secretly and illegally spying on not only foreign states, but American citizens, colleagues and even his friends. There were also the secrets and lies which exacted a very heavy toll on his mental health whereby he lied to official state departments and secretaries of state, his colleagues, family and friends, as well as for a lifetime, the rest of the world about his time at Riverbank and the Bacon ciphers present in the Shakespeare works.

Following some kind of recovery Friedman was charged by American Intelligence with the responsibility of acting as the top secret negotiator in a series of agreements which shaped the future of cryptologic systems around the world. In 1943, the United States of America and Great Britain signed the BRUSA Agreement (which Friedman helped draw up) which firmly established for the first time top secret co-operation on all communications intelligence.

In the spring of 1943 Friedman arrived in London as head of a US army delegation to a personal welcome by Sir Stewart Menzies, Director of the British Secret Service (MI6) and extensive secret briefings on British code-breaking successes. Shortly after the head of Bletchley Park travelled to Washington to formally sign the BRUSA (Britain/United States) agreement, parts of which are still classified.³⁹⁶ The landmark agreement established the fundamental principles for all future signal intelligence and communications between the powers during the Second World War later consolidated by the NSA and GCHQ.

In the *Shakespeare Unlimited* series which formed part of The Folger Shakespeare Library Exhibition *Decoding the Renaissance: 500 Years of Codes and Ciphers* (2014-5) Rebecca Sheir interviewed Bill Sherman, Head of Research at the Victoria and Albert Museum and Professor of Renaissance Studies at the University of York about the Bacon Bi-literal Cipher in *How Francis Bacon Helped Win World War II*. It was the period of the Renaissance which provided the inspiration for the pioneering code and cipher expert William F. Friedman, the chief cryptanalyst for the US government from his time at Riverbank working with his future wife Elizebeth S. Friedman on the Bacon Bi-literal Cipher through the 1950s, both of whom were regular readers at the Folger leading up to the publication *The Shakespearean Ciphers Examined*.³⁹⁷ In this interesting and revealing interview Professor Sherman explains how Friedman whose team broke the Japanese codes had once been a member of the Riverbank team with Elizabeth Wells Gallup searching for the presence of the Bacon Bi-literal Cipher in the Shakespeare works. It was through Friedman's early exposure to Renaissance and Baconian cryptology that shaped his later career which eventually earned him the title of the Founder Father of Modern American Cryptology.³⁹⁸

In the interview and podcast subtitled 'Not Single Spies, But in Battalions' taken of course from *Hamlet* (4:5:76-7) in which Hamlet is being carefully watched and spied on by Claudius and Polonius on behalf of the state of Denmark,³⁹⁹ Sheir asks Professor Sherman, a Fellow of the Folger Shakespeare Library, was it a surprise to him that the Folger had a world-class collection of books on cryptology 'Folger and his successors set about to gather a great library that would recover the world of Shakespeare, and almost any aspect of the world of Shakespeare was touched by communication and by secret communication.'⁴⁰⁰ Sherman tells Sheir that the great intellectual figure of Sir Francis Bacon credited with writing the first English text on ciphers inevitably forms part of the conversation on cryptology in Shakespearean England particularly his Bi-literal Cipher that he devised while he was a youth in Paris. He first referred to it in *The Advancement of Learning* (1605) which he expanded upon in his *De Augmentis Scientiarum* published within weeks of the Shakespeare First Folio in 1623. Because the Bi-literal Cipher is a binary code 'it actually is credited with being the beginning of the digital age that leads to computers.'⁴⁰¹ Sheir then asks Sherman about Fabyan, Riverbank and Friedman's time spent there and its pregnant implications:

SHERMAN: So, while Friedman is doing all of this teaching for officers headed over to participate in World War I, he's in effect creating the first systematic introduction to the subject in the form of both a curriculum, so he's teaching classes, and writings, he writes a whole series of writings, now called "The Riverbank Publications," which lay the foundations for the science, more or less as it is still practiced today. They're considered to be the founding papers in the history of military cryptography. So he then goes into government service, moves to Washington, DC, eventually works, of course, for the National Security Agency, once that's created. But during World War II, he is head of the team that breaks the Japanese code. So, without Bacon and Shakespeare, we might not have won the war in the Pacific, at least not the whole war.

SHEIR: So Bill, what do you come away from all of this thinking? Is that what impresses you most about it? The fact that we have this amazing connection between Bacon, Shakespeare, and the war?

SHERMAN: That's one of the things that I come away thinking. Another one is just how much continuity there is between the 16th century and the 20th. We think of someone like Friedman as a great innovator. He's someone who's bound up with, you know, all kinds of things that we see is quintessentially modern, but he got them through an almost *Alice*

Through the Looking Glass-like encounter with the early modern. And the techniques he develops, and the agencies like an NSA or CIA, they seem so modern, and yet almost everything he does, has a parallel or a source in the Renaissance.⁴⁰²

After the world had again rejected the madness of war the US began to embark on a restructuring of its intelligence services which also resulted in a series of changes for the Signal Intelligence Service. When SIS under its various name changes separated from the Signal Corps in 1945 and was subsequently placed under G-2 as the Army Security Agency, Friedman retained his directorship. In 1947 he was appointed the head Cryptologist of the Department of Defense and with the creation of the Armed Forces Security Agency (AFSA) in 1949 Friedman was made chief of the technical division. When the AFSA was in turn supplanted in 1952 by the National Security Agency Friedman became technical and special assistant to the NSA director in 1954.⁴⁰³ Throughout these years Friedman was given the responsibility of liaising between British and American intelligence agencies and helped draw up the post-war blueprint of the UKUSA Agreement in 1947 bringing together SIGINT (Signal Intelligence) organisations of the United States, Britain, Canada, Australia and New Zealand: 'Under the pact, the five nations carved up the earth into spheres of cryptologic influence'.⁴⁰⁴ The UKUSA Agreement stipulated the United States as first party to the treaty and Britain, Canada, Australia and New Zealand as second parties. Other nations belonging to NATO signed as third parties:

The UKUSA nations also agreed to standardize their terminology, code words, intercept-handling procedures, and indoctrination oaths, for efficiency as well as security. Vipar, Trine, and Umbra, therefore would appear on the TOP (or MOST) SECRET documents and intercepts, regardless of which member originated them.⁴⁰⁵

In the late 1950's Friedman was also involved in several top secret projects for the NSA arranging some type of secret security agreements with Crypto A.G. based in Switzerland, the largest supplier of cipher machine equipment to foreign governments around the world. The company was headed by Friedman's close friend Boris Caesar Wilhelm Hagelin. Friedman travelled to Switzerland where he is believed to have met Hagelin:

Exactly what happened during their meetings may never be known, but it seems likely that some sort of "deal" was offered to Hagelin by Friedman on behalf of the NSA. What this deal may have involved can be only speculation, but it appears likely that Hagelin was asked to supply to the NSA details about various improvements and modifications made to the cipher machines his company had supplied to other governments, including, especially, the members of NATO. This would have greatly shortened the time needed by the United States to break their code systems.

Evidence of this can be found in a worried request made by the NSA to the British author Ronald Clark, who wrote a biography of Friedman in 1977. In his book, Clark made several references to Friedman's 1957 trip and to two other trips Friedman made to England and Europe during April and May of 1958. On learning of Clark's intention to mention these trips, officials of the NSA approached him and expressed their "serious concern" about what might be revealed. They made several unsuccessful attempts to read the manuscript, both in the United States and Britain. Finally, not knowing how much Clark actually knew of the mission-which was very little-the officials reluctantly explained to him that their reason for worry was that "the book might discuss the supply of cipher machines to NATO; and that this would deprive NSA of the daily information enabling the NSA to read the secret messages of other NATO countries."⁴⁰⁶

Despite Friedman's ongoing troubling psychiatric problems his unique expertise was indispensable to the NSA in structuring and maintaining the United States vitally important supremacy in secret communications they secretly enjoyed over the rest of the world. But during the 1950's Friedman, who throughout his life was riddled with doubts regarding the morality of cryptology and what he perceived to be unnecessary secrecy, became increasingly disillusioned with the NSA.

In his semi-retirement he had kept his mind ticking over with regular sojourns into cryptology found in certain forms of literature. His old friend Rives Childs, whom he trained at Riverbank in 1917, had become a leading expert on Giovanni Casanova. The versatile Italian adventurer had taken a keen amateur interest in cryptography. On examining his papers Friedman demonstrated Casanova had deciphered a document based upon a Vigenère Square devised by the sixteenth century Frenchman Blaise de Vigenère. The original feat of breaking the Vigenère Square was generally attributed to Friedrich Wilhelm Kasiski, a nineteenth century Prussian officer, or more recently to the great English philosopher and mathematician Charles Babbage. Friedman showed Casanova had cracked the square a century earlier. Rather surprisingly his paper on Casanova attracted the attention of the NSA: 'The "authorities" even looked askance at my article on C[asanova] as Cryptologist, thus further making the whole subject of cryptology anathema to me,' he wrote to Childs, before expressing his unvarnished frustration "to hell with the ignorant S.O.B.s-have it your own way if you must."⁴⁰⁷

The outburst, writes his biographer, 'was no isolated explosion but the culmination of a long series of disagreements with the National Security Agency which for more than a decade had frustrated and finally humiliated the man whom the agency itself was openly acclaiming.'⁴⁰⁸ Previously when Friedman gave a lecture at the US Marine Corps Schools in Virginia on 'Communication Intelligence and Security' the NSA considered the subject so sensitive that Friedman was forbidden to keep copies of his own lectures.⁴⁰⁹ His disenchantment increased at a SCAMP symposium held in 1958 at the University of California when Friedman learnt that he was prohibited by the NSA from using parts of the material he had researched and produced for the lecture.⁴¹⁰

His own ideas on where to draw the line on secrecy and security were well expounded after he had signed a year's contract as a consultant with the RAND Corporation. His brief was to undertake 'such studies as he and RAND jointly determine to be beneficial to the performance of the USAF Government contract AF 18(600)-1600; such undertakings shall include consultations on the theory of secrecy on the conduct of national defence affairs; methods, procedures and means for establishing and maintaining secrecy; old and new procedures for classifying, handling, storing and safeguarding official documents pertaining to the foregoing matters, and related subjects'.

...He commented that some old cryptographic material had been upgraded after many years. He found this difficult to understand and he no doubt hoped that his advice would lead to less bizarre situations. Instead, he was to find that cryptographic material dealing with the American Civil War-and even some dealing with the American Revolution-had to be reclassified as 'Confidential' on NSA orders.

The near-pathological passion for security with which the agency began to invest material long open to the world at large became one factor in Friedman's growing disillusion with it, a disillusion which by the mid-1960s spurred him to write: 'I am hampered by restrictions which are at these times so intolerable and nonsensical that it is a wonder that I have been able to retain my sanity.' The words were not lightly used and there are suggestions that the grotesqueness of some agency actions did in fact drive Friedman to the point of mental breakdown.⁴¹¹

The deteriorating relationship was further compounded when Friedman foresaw the far reaching implications of the review of cryptographic documents being carried out by the Security Classification Review Board. The treatise on German ciphers used in the First World War compiled by his Riverbank friend Rives Childs, which had been available for years on the shelves of the Library of Congress, was to be upgraded to 'Confidential'. Included among the works to be reclassified was his own *The Index of Coincidence* written while at Riverbank during the period he and wife Elizebeth S. Friedman were involved in the investigations into the Bacon Bi-literal Cipher and for decades readily available throughout the world.⁴¹² Friedman later wrote to one of his friends 'that he had been grossly hurt by the people at NSA because they distrusted him and deliberately reclassified all his papers so that he would not be able to sell any of the historical ones, and he began feeling that the people at NSA were "out to get him"',⁴¹³ and to another old friend that 'The NSA considers me their greatest security risk.'⁴¹⁴ It was even suspected by the Friedmans that the NSA were watching them and tapping their phones and possibly intercepting and reading their mail.

On 30 December 1958 several agents from the NSA and the US government arrived at the Washington house of William and Elizebeth Friedman situated close to Capitol Hill. The team was headed by S. Wesley Reynolds, the NSA's Director of Security, an agent working for him and another individual acting on behalf of the US Attorney-General. The NSA team were there to inspect and search their personal library on the second floor where they meticulously kept all their letters, paper, documents and their own publications dating back to their days at Riverbank, where they had investigated the presence of the Bacon Bi-literal Cipher in the Shakespeare works. The Director of Security informed the Friedmans they had been directed to remove a list of books and documents the NSA wished to reclassify in accordance with a Defense Department Order dated 8 July 1957 (Directive 52000.1) which declared that cryptologic material previously marked as Restricted were now reclassified as Confidential.⁴¹⁵ The NSA team removed forty-eight items including letters, his own lecture notes, articles, and books Friedman had written about cryptology, including his Riverbank Publications, from four decades earlier.⁴¹⁶ Increasingly, writes Butler Greenfield, 'the higher-ups at the agency came to see William as a loose cannon. After using him for one last vital mission, they clamped down on him. The library raid was part of that clampdown, and to the NSA it seemed justified [that] Elizebeth and William believed...had been intended to humiliate and intimidate...the raid was a turning point for Elizebeth and William-and the start of a downward spiral':⁴¹⁷

If William and Elizabeth saw the library raid as a humiliation, it was not the only one. William was soon required to surrender additional documents to the NSA, and his talks and lectures were censored. When he asked for permission to publish articles about the early history of code breaking, the NSA forbade him to do any such thing. He was not even allowed to republish an article about literary ciphers in Edgar Allan Poe's nineteenth-century short story "The Gold-Bug." In 1960, when the NSA restricted his access to top-secret materials, William was crushed.

They were "clamping down on everything he did," Elizebeth later wrote. Although William tried to find acceptable projects, he could never predict what the NSA might censor.⁴¹⁸

The deep distrust the NSA evidently felt towards the Friedmans continued to the end of their lives even long beyond their graves and resulted in the NSA monitoring and confiscating some of their papers later placed in the George C. Marshall Library with some documents and secret information relating to William and Elizebeth Friedman still classified Top Secret by the US government to the present day.

The Friedmans felt persecuted, William drank too much, and they constantly worried and obsessed about money and their finances. We catch a stark picture of his fragile mental state and psychological and emotional instability in some inchoate ramblings, scribbled down on a piece of loose paper, later found in the Friedman archives:

Have insight into what is wrong, but it doesn't help much, my nervousness, depression, at times despondency-frightening to be alone a/c suicidal thoughts-realization of how wrong that would be in all respects. Flight, fight, or neurosis. For 50 years have struggled with this off and on. Nevertheless have accomplished great deal-my reputation-but feeling of being "has-been" unendurable. Jealousy of men who have been able to retire & go to other jobs of usefulness and carry on but not I. Why am I driven so by feeling that I must continue to garner laurels. Repression by secrecy restrictions-fear of punishment chimerical but still there. "Floating anxiety" which attaches itself to anything and everything. Fear that E [Elizabeth] despises me for being such a weakling. Difficulty re prostatitis? Fear of death? No, fear of living on self-pity. Realization that my fear of going out is only reflection of psychic feeling of insecurity.⁴¹⁹

It was in these years leading up to their problems with the NSA that the Friedmans felt they had some leftover business to attend to. They decided to embark on a trip down memory lane and turn their attentions to the subject instrumental in bringing them together forty year earlier at the Riverbank estate namely, the subject of whether there were Baconian ciphers in the Shakespeare-and various other Elizabethan-works:

By the late 1940s Friedman and his wife decided that they had enough material for a major book on the Shakespeare controversy. Before they could seriously begin work on it, however, he was to pass through another troubling phase of psychiatric illness. Once again, it is not possible to be certain of the real cause; but once again suspicion falls on the underlying ambiguities of professional work-by now much concerned with the problems of genuine post-war collaboration between the wartime Allies-which Friedman was unable to discuss even with the psychiatrist chosen to help resolve his difficulties.

By Christmas 1949 he was profoundly depressed and by the following months appears to have been considering suicide once again. He entered Mt Alto Hospital voluntarily, but disliked it intensely, partly because he was placed with psychotic patients much sicker than he was. Movement to an open ward from which he could make weekend visits to his home failed to improve matters very much and in March 1950 he entered the Psychiatric Unit of George Washington University Hospital for electroshock therapy. 'He received a total of 6 electroshock treatments, each without incident or complication,' says his psychiatrist. 'He made a rapid and dramatic recovery and was discharged from the hospital on April 11...

The dangerous corner turned, he now faced the Shakespeare controversy once more....⁴²⁰

5.

**THE FOLGER SHAKESPEARE LIBRARY A SECRET BACONIAN-
ROSICRUCIAN-FREEMASONIC INSTITUTION AND THE FRIEDMAN'S
FOLGER PRIZE-WINNING MANUSCRIPT *THE CRYPTOLOGIST LOOKS
AT SHAKESPEARE***

The Folger Library maintains the culture of modesty and secrecy established by its founders.

[Andrea E. Mays, *The Millionaire and the Bard Henry Folger's Obsessive Hunt for Shakespeare's First Folio* (New York and London: Simon & Schuster, 2015), p. 271]

Henry [Folger] would call for stained-glass windows, crests, floor tiles, quotations cut in stone, and symbols-including the ubiquitous Tudor Rose-carved in wood. He chose every design element to communicate a specific meaning-many of them sophisticated and obscure. The symbols, images, and sayings formed a silent composition that only he and Emily could hear....Folger exercised great care in choosing them, specifying their exact spelling and punctuation, preserving archaic forms. In the realm of these secret words and signs, only a time traveler or a scholar could comprehend and decode them.

[Andrea E. Mays, *The Millionaire and the Bard Henry Folger's Obsessive Hunt for Shakespeare's First Folio* (New York and London: Simon & Schuster, 2015), p. 240]

The Folgers trace their colonial descent directly back to Peter Folger (1617-1690) translator and government official born in Norwich, England, in 1617, the son of John Folger and Meriba Gibbs.⁴²¹ His father John Folger was born in 1594 in the county of Norfolk and his wife Meriba Gibbs two miles east of the county of Norfolk, England in 1600. Virtually nothing is known about either John and Meriba Gibbs Folger and the early years of their son Peter. There is however every likelihood that the Folgers knew members of the Bacon family. The twin counties of Suffolk and Norfolk of East Anglia were the political strongholds of the prominent Bacon family, whose wide and extensive private and social circles, extended across the whole region. The great Lord Keeper Sir Nicholas Bacon, son of Robert Bacon of Drinkstone, Suffolk whose first wife was Jane, daughter of Thomas Ferneley from West Creting, Suffolk, built his first country seat at Redgrave in Suffolk and owned property and land in parts of both Suffolk and western Norfolk. His eldest son and namesake Sir Nicholas Bacon (c. 1543-1624) married Anne, daughter and heir of Henry Bures of Acton, Suffolk who received from his father the Bacon family country seat at Redgrave and through his wife he inherited substantial estates in both Norfolk and Suffolk. He was first knight of the shire for Suffolk in 1572 and both Sheriff of Suffolk in 1581-2 and of Norfolk in 1597-8, Justice of the Peace in Suffolk from 1573 and in Norfolk from 1578 almost continuously until 1624. His younger brother Sir Nathaniel Bacon (1546?-1622) who married Anne, illegitimate daughter of the financier Sir Thomas Gresham the founder of the Royal Exchange and Gresham College, forerunner of the Rosicrucian Royal Society, through their respective fathers inherited substantial land and property in Suffolk and Norfolk. He and his Anne settled at Stiffkey Hall and for the next forty years Sir Nathaniel Bacon devoted himself to the governance of local government. He was appointed Justice of the Peace in 1573 a position he served until his death and in 1582 he was appointed deputy steward of the duchy of Lancaster estates in Norfolk. He also served twice as sheriff of Norfolk in 1586-7 and again in 1599-1600, twice as second knight of the shire for Norfolk in 1584 and 1593, as well as Burgess for King's Lynn, Norfolk in 1597, the county Sir Nathaniel famously described as his 'country'.

The younger brother Edward Bacon (1548/9-1618) who married Helen, daughter of and heir of Thomas Little of Bray Berkshire and Elizabeth, daughter of Sir Robert Lytton of Knebworth, Hertfordshire from 1592 settled with his wife at Shrubland Hall, Suffolk the county in which he served as Justice of the Peace between 1592 and 1609 and sheriff in 1600-1.⁴²² The great philosopher-poet Francis Bacon, concealed author of the Shakespeare works, the *raison d'être* of Henry and Emily Folger for the Folger Shakespeare Library, successively served as the Member of Parliament for Ipswich in the county of Suffolk in 1597, 1601, 1604 and 1610.

This was the period of the great expansion into North America secretly directed by Francis Bacon and his Rosicrucian Brotherhood that was to forever change the future direction of the modern world. Several earlier attempts at establishing an English settlement in America had run into difficulties and though these earlier expeditions had provided the necessary knowledge and experience in paving the way for the colonisation of America the situation at the turn of the seventeenth century had now become critical. In 1606, the Virginia Company was formed to organize and promote the colonisation of Virginia and shortly after the first permanent English speaking settlement in North America was established at Jamestown, Virginia in 1607, the seed which grew and evolved into the first modern constitutional and federal republic, the United States of America.⁴²³

The great American historian Alexander Brown in the preface to his standard work *The Genesis of the United States* observes that the period between the return of the expedition of Captain Weymouth to England in July 1605, sent out by Sir Ferdinando Gorges, Thomas Arundel, Lord Wardour, and his brother-in-law Henry Wriothesley, Earl of Southampton and the return of Dale in June, 1616 constituted the most vital period in the history of the formation of the United States of America and the future direction of the world:

This was the period of “*the first foundation*.” It found many Englishmen ready and resolved to secure, for their country and for their religion, “a lot or portion in the New World,” regardless of the claims of Spain and Rome; it witnessed the granting of the first public charters in England and the planting of the first public colonies in Virginia; it saw the greatest difficulties overcome, and it closed with the irrevocable establishment of the English race on American soil. It was the crucial period of English occupancy of North America; if the enterprise had then resulted in failure, the United States would not now be in existence.⁴²⁴

The identity of the original Founding Father of the United States of America, namely Francis Bacon-Shakespeare-known to his Rosicrucian-Freemasonry Brotherhood, has been carefully concealed, hidden and obscured from the conventional pages of history and the pages of his orthodox editors and biographers. But it was certainly known to Alexander Brown who cryptically reveals it to us in *The Genesis of the United States*. The first page of his preface which sits immediately above the passage quoted above very deliberately produces the following apposite words from Lord Bacon:

“As in arts and sciences to be the first inventor is more than to illustrate or amplify; and as in the works of God the creation is greater than the preservation; and as in the works of nature the birth and nativity is more than the continuance; so in kingdoms the first foundation or plantation is of more noble dignity and merit than all that followeth. And the foundation that makes one of none, resembles the creation of the world, which was *de nihilo ad quid*.”-SIR FRANCIS BACON.⁴²⁵

The above passage contains a total of 387 letters a split and simple and kay cipher for Francis Bacon (100)/Fra Rosicrosse (287) conveying the enciphered secret message Francis Bacon, Brother of the Rosy Cross, is the Founding Father of the United States of America.

In the June of 1609 under Sir George Somers, Admiral of the Fleet, a fleet of ships set sail from Plymouth with men and supplies to strengthen the colony. On 24 July one of the ships the Sea Venture carrying Sir Thomas Gates and William Strachey, who was to be appointed Secretary to the Council, was caught up in a fierce tempest off the coast of Bermuda where they became separated from the rest of the fleet and ran aground on the islands. The ship became wedged between rocks but fortunately everyone got safely ashore. The rest of the ships successfully made it to Virginia. After building two ships during the winter in Bermuda the shipwrecked crew arrived at Jamestown in May 1610 and joined up with the rest of the expedition. The first arrivals found the colony in Jamestown in an appalling state. Many of the colonists had died in the winter of starvation and provisions were still low and disease rampant. In the absence of any direct authority anarchy reigned with the whole colony on the point of collapse. News began to reach England that some of the key figures had been lost at sea. In an attempt to allay the growing disquiet and to raise much needed funds the Virginia Council entered in the Stationers' Register on 14 December 1609 *A Trve and Sincere declaration of the purpose and ends of the Plantation begun in Virginia* which was most probably published shortly after.⁴²⁶ The text of this original rare edition was reprinted for the first time by Brown, which he believed 'contains more historical information regarding our foundation than any other publication of the authorities, or authorized by them.'⁴²⁷ *The True and Sincere Declaration* states D. G. James in *The Dream of Prospero* (Oxford Clarendon Press, 1967) is 'a masterly, noble, and moving document, and was heavy with destiny for the future of England and the United States.'⁴²⁸

On 8 November 1610 the Virginia Council of London entered on the Stationers' Register a second similarly entitled document *A Trve Declaration of the estate of the Colonie in Virginia, with a confutation of such scandalous reports as haue tended to the disgrace of so worthy an enterprise*.⁴²⁹ The identity of the anonymous author of these two historically prophetic documents issued under the auspices of the Virginia Council has never been fully determined and until recently has attracted very little or no discernible attention.

After giving a series of lectures in the University of Oxford in 1950, which were firstly chiefly taken up with exploring *Hamlet* and *King Lear* in relation to Bacon's *Advancement of Learning*, D. G. James delivered a further series of lectures on the play *The Tempest* in *The Dream of Prospero* wherein he 'tried to see Shakespeare and Francis Bacon in comparison with each other as prophets and makers of the modern world.'⁴³⁰ A part of his work relating to the Baconian-Shakespearean *The Tempest* is devoted to a brief history of the colonisation of Virginia leading him to examine the two documents issued by the supreme authority of its council:

A True Declaration requires to be read as a document which, in its ordering of fact and argument, and in its majestic eloquence, exceeds only *A True and Sincere Declaration* in communicating to us the feel and pressure of the time in its resolve to create a new English world and a vast extension of the Kingdom of Man.

The Kingdom of Man! The phrase is Francis Bacon's, who in the *New Atlantis* was to speak of 'enlarging the bounds of human empire'. To whom did the Virginia Council turn to compose the *Declarations*, so critical for the future of civilization in the West? We need to remember that the meetings of the Council were held in secrecy. To whom, of their number,

PREFACE.

"As in arts and sciences to be the first inventor is more than to illustrate or amplify ; and as in the works of God the creation is greater than the preservation ; and as in the works of nature the birth and nativity is more than the continuance ; so in kingdoms the first foundation or plantation is of more noble dignity and merit than all that followeth. And the foundation that makes one of none, resembles the creation of the world, which was *de nihilo ad quid*." — SIR FRANCIS BACON.

65
67
67
71
66
51
387

THIS work is especially devoted to the period included between the return of Weymouth to England in July, 1605, and the return of Dale in June, 1616. This was the period of "*the first foundation*." It found many Englishmen ready and resolved to secure, for their country and for their religion, "a lot or portion in the New World," regardless of the claims of Spain and Rome ; it witnessed the granting of the first public charters in England and the planting of the first public colonies in Virginia ; it saw the greatest difficulties overcome, and it closed with the irrevocable establishment of the English race on American soil. It was the crucial period of English occupancy of North America ; if the enterprise had then resulted in failure, the United States would not now be in existence. Yet, because of the insufficiency and inaccuracy of the only available sources of information, this period has hitherto been most imperfectly understood. The text of the first sermon (see p. 287) preached before the first company of Virginia has long since been fulfilled. We have long been "a great nation," and yet a full and fair account of our very beginning has never been accessible to us. The object of this work is to supply (at least in part) this national deficiency.

Time covered
by the work.

I do not attempt to give a history of the colonies in

Fig. 47 The deciphered Preface page of *The Genesis of the United States* Revealing that Francis Bacon is the Secret Founding Father of the United States of America

would they turn? I do not doubt that it was to the Solicitor-General, incomparably the greatest advocate and orator of the age. The writer of *A True Declaration* ‘professeth that he will relate nothing (concerning *Virginia*) but what he hath from the secrets of the iudiciall councill of *Virginia* from the letters of Lord *La Ware*, from the mouth of *Sir Thomas Gates*, whose wisdomes (he conceiue) are not so shallow, as easily to be deceiued of *others* nor consciences so wretched, as by pretences to deceiue others’. He was clearly a person of great position and authority; and he does not hesitate to use the first person singular: nor had the writer of *A True and Sincere Declaration*.

...Bacon’s authorship of the *Declarations*, or, at the least, his great hand in their composition, becomes clear to anyone who, having read over the *Declarations*, recalls, or then reads over, others of Bacon’s writings. To read over the first book of *The Advancement of Learning* is to see the same style, ordonnance, and learning at work as show themselves in the *Declarations*; or again, there are *Of the True Greatness of the Kingdom of Britain* (1608), and *An Advertisement touching an Holy War* (1622); there are also, smaller in scope, the essays *Of the True Greatness of Kingdoms and Estates* and *Of Plantations*. The same hand is to be seen in all.

The reader of the two *Declarations* will see that the first is plainer, more direct, and less learned than the second; it is in the second that Bacon exercises his full armoury, both in its depth or argumentation and in its manner: it is full of Bacon’s magnanimity, and that ‘high learning, which he wore with as little concealment as a diamond’. But in the first are the words which I quoted earlier from the prayer with which *A True and Sincere Declaration* ends, where we read of the ‘nourishing’ of the ‘graine of seed, that it may spread till all the people of the earth admire the greatnesse, and seeke the shades and fruite thereof’. This image recurs again and again, in the writings to which I have just referred. In *Of the True Greatness of the Kingdom of Britain*, written, it seems, in 1608, we read that ‘the true greatness of kingdoms upon earth is not without some analogy with the kingdom of Heaven, as our Saviour describes it: which he doth resemble not to any great *kernel* or *nut*, but to one of the least *grains*, but yet such a one as hath a property to grow and spread’.⁴³¹

He had previously taken recourse to this one of his favourite metaphors in an earlier speech delivered in parliament in 1607 *Concerning the Article of Naturalization* ‘For certainly the kingdoms here on earth have a resemblance with the kingdom of heaven, which our Saviour compareth not to any great kernel or nut, but to a very small grain, yet such a one as is apt to grow and spread.’⁴³² In direct reference to *Virginia* he also used the same metaphor in parliament in February 1621 ‘This Kingdom now first in his Majesty’s times hath gotten a lot or portion in the New World, by the plantation of *Virginia* and the Summer Islands. And certainly it is with the kingdoms on earth as it is in the kingdom of heaven. Sometimes a grain of mustardseed proves a great tree.’⁴³³ These represent only a small fraction of the numerous correspondences and parallels found in *A True and Sincere Declaration* and *A True Declaration of the estate of the Colony in Virginia* and the works of Bacon and his Shakespeare play *The Tempest*.⁴³⁴

The title-page of *A True and Sincere Declaration* is divided into several sections. The top section contains a total of 70 words, 133 italic letters and 207 roman letters. The 133 italic letters plus 70 words: 133+77=203 Francis Bacon (100)/Shakespeare (103) in simple cipher and the 207 roman letters plus 70 words: 207+70=277 Francis Bacon (100)/William Shakespeare (177) in simple cipher. In the next section there are 39 roman letters F. Bacon in simple cipher. Below this section there are two verses separated from the rest of the text by horizontal lines. In the first of these two sections there are 60 italic letters in the verse and 6 roman letters in ‘Prouer’: 60+6=66 a double cipher for Bacon (33)/ Bacon (33) in simple cipher. In the second verse the 62 italic letters added to the 4 digits: 62+4=66 a double cipher for Bacon (33)/Bacon (33). The two verses contain a total of 122 italic letters and the addition of the

numbers $2+5+1+1+1+7+1+1=19$: $122-19=103$ Shakespeare in simple cipher. In the bottom section there are a total of 20 words containing 79 letters and 4 digits in the date: $20+79+4=103$ Shakespeare in simple cipher which minus the 3 italic words the ('I' represents a word) $103-3=100$ Francis Bacon in simple cipher. The whole page contains a total of 134 words which plus the addition of the numbers in the two verses $2+5+1+1+1+7+1+1=19$ and the 4 digits in the date: $134+19+4=157$ Fra Rosicrosse in simple cipher.

The title page of the *A True Declaration* is divided into two sections. The top half contains 39 words F. Bacon in simple cipher and the bottom half has 13 italic letters, 15 roman words, 4 digits in the date, plus the single emblem $13+15+4+1=33$ Bacon in simple cipher. The whole page has a total of 263 letters which minus the 4 digits in the date: $263-4=259$ Shakespeare in kay cipher. The 263 minus the 4 digits in the date and 2 italic words: $263-4-2=257$ Francis Bacon (100)/Fra Rosicrosse in simple cipher.

For self-evident reasons the Virginia Council of which Bacon was the key member attached strict secrecy to all communications, manuscripts and writings relating to the colony that it did not want conveying to the public, that might in any way jeopardise the success of the project and future of the North American continent.

In addition to *A True and Sincere declaration of the purpose and ends of the Plantation begun in Virginia* and *A True Declaration of the estate of the Colonie in Virginia* both anonymously written by Bacon it is also certain that Bacon made use of Strachey's *True Reportory of the Wrack* dated 15 July 1610 (not published until 1625) for the latter *A True Declaration* is a direct and immediate source for his New World masterpiece *The Tempest*. The first recorded performance of *The Tempest* took place on 1 November 1611 at the royal court of James I. It opens with an inspired dramatic enactment of the tempest faced by the *Sea Venture* which occurred off the coast of Bermuda as the colonists headed to Virginia, location of the first permanent English settlement in North America—a dramatic symbolic portrayal, representing the birth of what became the United States of America.

The special play occupies a unique place in Shakespearean dramatic literature and for that reason is deliberately printed as the first play in the Shakespeare First Folio. Its central God-like figure the scientific-philosopher Prospero is a complex dramatic portrait made in the image of his creator, the scientific-philosopher Francis Bacon, Founding Father of Modern Science and the Modern World. Through his all-knowing and all-seeing mind the scientific-philosopher Prospero/Bacon controls the world and destiny of humankind and can be seen as the commander-in-chief of the Rosicrucian Brothers who govern the invisible Salomon's House in his *New Atlantis (Land of the Rosicrucians)*, with Solomon's House, or Solomon's Temple, the central legend of its outer body, the Freemasonry Brotherhood. *The Tempest* described by Dr Yates as a 'Rosicrucian manifesto',⁴³⁵ is a condensed dramatic reflection of the discovery of the New World of North America and *New Atlantis (or, The Land of the Rosicrucians)* a philosophical and scientific blueprint for what became the United States of America, whose coeval the first Rosicrucian manifesto the *Fama Fraternitatis*, was first issued with their divine statement of intent of *The Universal of the Reformation of the Whole World*.

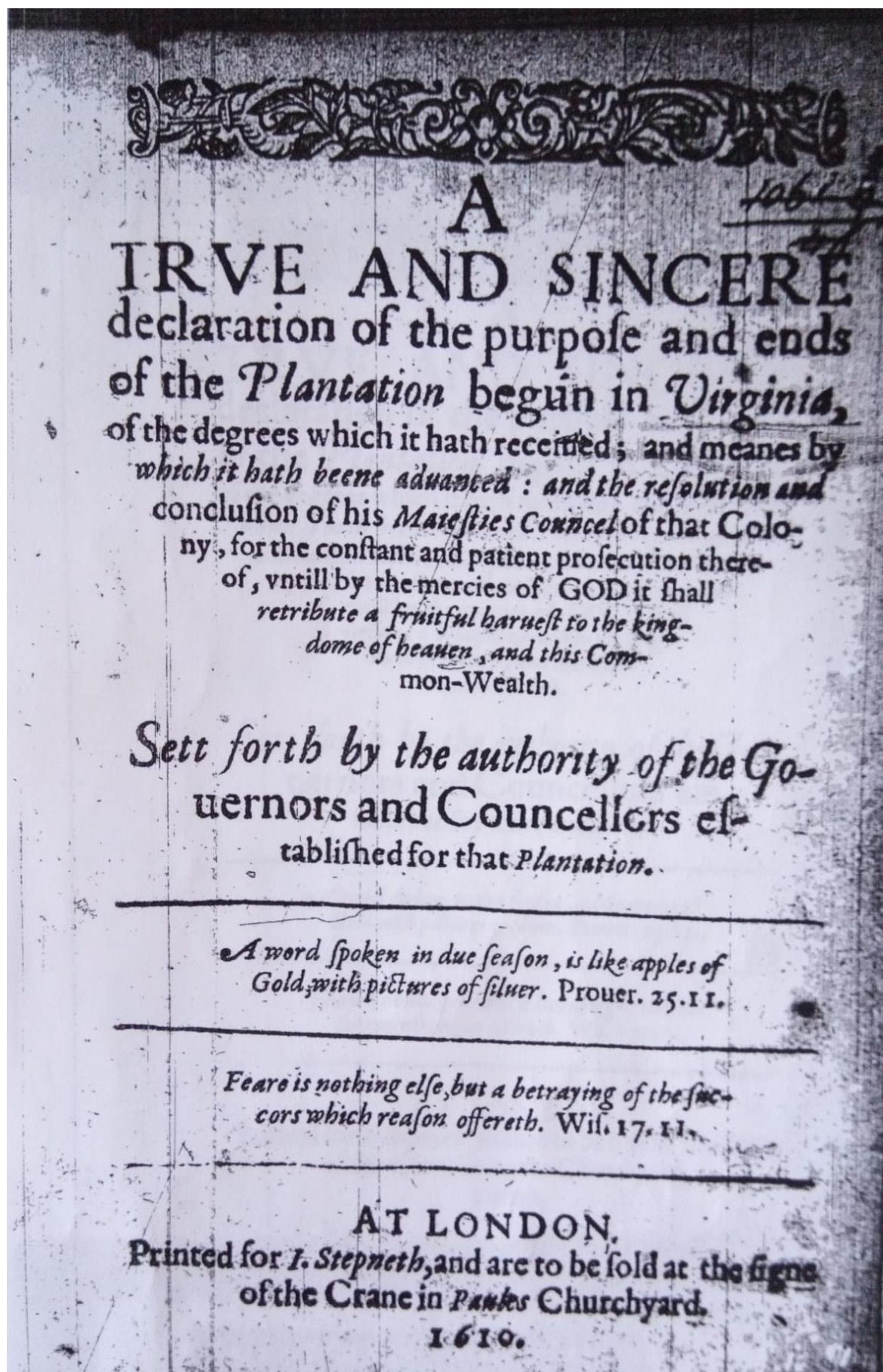
Several writers have commented upon the likely date when Freemasonry was most probably introduced into the United States of America. In *Freemasonry in all Ages* Reverend Carey, Associate of the Philosophical Society of Great Britain, commented

1
14
30
12 18
42
43
25 16
42
32
34
22
9

207 133

RL
23
16
39
IL
36
30
66

IL
39
23
Digits 4
66



1
3
6
6
10
9
8
7
8
7
5
70

2+5+1+1+

1+7+1+1

19

Words Letters

2 8
12 43

6 28
20 79

4 digits = 103

Fig. 48 The deciphered title page of *A True and Sincere declaration of the purpose and ends of the Planation begun in Virginia* confirming Bacon's anonymous authorship

Words

Letters

1

1

2

9

2

11

5

20

1

8

6

26

7

33

5

27

7

34

3

39

18

1 emblem



15 RW

13 IL

4 date

6

37 2 IW

33

263

4 date

Fig. 49 The deciphered title page of *A True Declaration of the estate of the Colonie in Virginia* confirming Bacon's anonymous authorship

‘We are furnished with no documentary evidence of the introduction of Freemasonry into the United States; but it appears that it had an existence there as early as the year 1606.’⁴³⁶ In *The Temple and the Lodge* under the heading ‘Freemasonry and American Independence’ Baigent and Leigh were also familiar with the belief Freemasonry was transplanted to the New World at the time of the Jamestown settlement:

According to some traditions, a form of Freemasonry or proto-Freemasonry came to the New World as early as the Jamestown settlement of 1607 and established itself in Virginia, working to promote the kind of idealised society outlined twenty years later by Francis Bacon in such works as *The New Atlantis*. This possibility cannot entirely be discounted. The ‘Rosicrucian’ thinkers of the early seventeenth century were obsessively aware of the opportunities America offered for the idealised social blueprints that figured so prominently in their work. So, too, were the members of the ‘Invisible College’ which eventually became visible in the form of the Royal Society. It would be most surprising if at least something of their ideas did not find its way across the Atlantic. In any case, the first transplantations of Freemasonry to America, when and wherever they occurred, would have been as inevitable, as routine, as predictable and, initially, as devoid of major consequence as the transplantation of other English attitudes and institutions. No one could have foreseen the significance these transplantations would quickly assume.⁴³⁷

A less diffident Manly P. Hall confidently states:

After the Jamestown settlement gained some semblance of order and permanence, descendants of those men who formed the original Baconian Society left England and settled in the colony. It was through them that the Great Plan began to operate in America. There were most fortuitous marriages between the families of the original custodians of the philosophical legacy. From the minglings of the bloods of the Bacons, the Wottons, the Donnes, the Herberts, and the Mores, the Virginia colony derived many of its prominent citizens. Lord Bacon guided the project and probably outlined the program to be followed after his death.⁴³⁸

It is conceivable that through knowledge of the activities of Francis Bacon and the London Virginia Company and the first permanent English settlement in Jamestown, followed by Bermuda (1609), Newfoundland (1610), and afterwards Massachusetts, founded by the Pilgrims transported across the Atlantic in the *Mayflower* in 1620, that the Folger family developed the idea of emigrating to the New World. It is not known whether any of the Folger family or their relatives were members of the Rosicrucian-Freemasonry Brotherhood or whether any of them were on close and intimate terms with Bacon and privy to the secret of his authorship of the Shakespeare works, possibly carried with them on their journey to America, that passed down the Folger family from generation to generation. A secret known to the great scion of the Folger family and the leading light of the Rosicrucian-Freemasonry Brotherhood, Benjamin Franklin, the great ancestor of Henry Clay Folger, founder of the Folger Shakespeare Library.

The elusive John Folger and his eighteen year old son Peter Folger emigrated to Massachusetts in 1635. During his voyage to America on the vessel *Abigail* Peter first met Mary Morrill, an indentured servant, and spent the next nine years working as a weaver, miller, surveyor and shoemaker to raise the £20 to buy her out of her contract whom he married in 1644. The father and son initially settled in Dedham and then in Watertown, Massachusetts where John Folger acquired six acres of land which served as a small family holding. During the 1640s the Folgers moved to Martha’s Vineyard (now the home and destination of the rich and powerful American elites) an island

located south of Cape Cod in Massachusetts where Peter Folger began a long career as an intermediary and interpreter with the Indian population. He learned Algonquian, one of the major American indigenous languages and at the Puritan mission he taught the natives Indians the English language.⁴³⁹ Peter and Mary Folger had nine children that survived infancy all born on Martha's Vineyard save their youngest Abiah, who was the mother of the great writer, scientist, and philosopher Benjamin Franklin, the most important Rosicrucian-Freemason of his time. In 1663 the Folgers returned to Nantucket where Peter Folger made a lasting impression for his learning and industry which characterised his illustrious grandson Benjamin Franklin, one of the Founding Freemasonic Fathers of the United States of America and signatory to the Declaration of Independence. Macy writes:

Peter was probably the best educated man on the Island and had the proprietors known that they were employing none other than the grandfather of Benjamin Franklin, his honors, doubtless, would have been greater than they saw fit to accord him. But the many-sidedness of our Great Philosopher, Dr. Franklin, is more readily understood in the light of his maternal grandfather's accomplishments.⁴⁴⁰

W. O. Stevens observes:

...the characteristics of the Folgers were independence, force of character, and intellect, and an amazing versatility. The Folger type of mind was inventive, mechanical, and scientific. His grandson, Benjamin Franklin, was a true Folger.⁴⁴¹

Peter Folger died on Nantucket Island in 1690:

His importance resides not only in his role as a biological sire of a great American family, but as an intellectual forefather whose early concern with religious liberty, racial tolerance, freedom of expression, and democratic government would through his own work and that of his descendants, help to shape the nation.⁴⁴²

In his autobiography the great American statesman Franklin praised his grandfather's work for being 'in favour of liberty of conscience, and in behalf of the Baptists, Quakers, and other Sectaries, that had been under Persecution'.⁴⁴³

His grandson, the natural philosopher and American statesman, Benjamin Franklin (1706-90) was born sixteen years later on 6 January 1706 to Josiah Franklin (1657-1745) who had also emigrated from England and his second wife Abiah Folger (1667-1752). From a relatively young age Franklin had a stellar rise through the ranks of the Freemasonry Brotherhood. He was admitted a Freemason in January 1731 and elected Grand Master on St John's day 24 June 1734. In the same year Franklin printed James Anderson's *Book of Constitutions*. The work was first printed under the auspices of the Grand Lodge of England in 1723 a hundred years (100 Francis Bacon in simple cipher) after the publication of the Shakespeare First Folio in 1623, followed by a second edition of the *Constitutions* at London in 1738. All three editions contain the presence of numerous Baconian-Rosicrucian-Freemasonic ciphers. In 1744 Franklin established The American Philosophical Society with a prospectus echoing Bacon's *New Atlantis (Land of the Rosicrucians)* modelled along the lines of the Rosicrucian-Freemasonic Royal Society of London.⁴⁴⁴ He was appointed Provincial Grand Master in 1749. Three years later Franklin was one of the committee tasked with planning the building of Freemason's Lodge and on 24 June 1755 he took a leading role in its dedication in what is seen as the first Freemasonic building in America.⁴⁴⁵ His work in

Freemasonry ‘exceeded that done by any other Mason of that period, was of the same pattern as the work he did for his new, young, nation, a work of statesmanship, national work, permanent work, and as one of the architects of the American Craft which was later to prove to be the best-organized and largest National System of Masonry anywhere in the world.’⁴⁴⁶ The period of 1757 to 1762 was spent by Franklin in England where he lodged with his son William at 7 Craven Street in London. In 1756 Franklin was elected a Fellow of the Baconian-Rosicrucian-Freemasonic Royal Society founded a century before by the disciples of Lord Bacon at London in 1660.

In 1667 the official account of its obscure origins was published by Thomas Sprat as *The History of the Royal Society* with a very important and revealing frontispiece. At its centre is a bust of King Charles II, with William Brouncker, its first president to his right, and on his left its true founder Bacon the Supreme Head of the Rosicrucian-Freemasonry Brotherhood. Its prime mover Lord Bacon is sitting under the prominent winged angel holding a trumpet, alluding to his first Rosicrucian manifesto the *Fama Fraternitatis* which concludes with ‘Sub Umbra Alarum Tuarum Jehova’ (‘under the shadow of Jehova’s wings’):

The first impression is the Masonic pavement in the forefront of the picture. It pushes towards the viewer so that it cannot be ignored. All Masons are told about the black and white chequered floor of the lodge room...

The compasses and squares, of which there are four compasses and three squares in the plate, are described in Masonic ritual as follows: ‘The compasses and square, when united regulate how lives and our actions. The compasses belong to the Grand master in particular and the square to the whole craft.’...

Finally there is the positioning of the three figures. The seating of the officers of a lodge of Freemasons is very carefully controlled. Charles is placed as the Grand Master in the East, with the light of the rising sun behind him. Brouncker is placed in the seat of the senior working officer while Bacon is placed in the seat of the immediate Past Master.

...Bacon...is [also] shown in the frontispiece...wearing the jewel and collar of a Chaplain of the Lodge of Edinburgh.⁴⁴⁷

The name of Benjamin Franklin appears in the *Philosophical Transactions of the Society* as early as 1748 and later in 1753 he was awarded the Copley Medal for his own large collection of experiments which over a period of years he communicated to the Royal Society.⁴⁴⁸ The certificate proposing Franklin is signed among others by the Secretary of the Royal Society, Thomas Birch, editor of both the *Letters, Speeches, Charges, Advices, &c. of Francis Bacon* (1763) and the five volume edition of *The Works of Francis Bacon, Baron of Verulam, Viscount St Alban, and Lord High Chancellor of England* printed at London in 1765 (replete with Baconian-Rosicrucian ciphers):

Benjamin Franklin, Esq., of Philadelphia, a gentleman who has very eminently distinguished himself by various discoveries in natural philosophy, and who first suggested the experiments to prove the analogy between lightning and electricity, being desirous of being elected a Fellow of the Royal Society, is recommended by us, in consideration of his great merit, and of his many communications, as highly deserving the honor he desires.

Signed Macclesfield, Parker, Willoughby,
P. Collinson, W. Watson, Thomas Birch,
James Parsons, John Canton.⁴⁴⁹



Fig. 50. The Rosicrucian-Freemasonic Frontispiece to the 1667 edition of *The*



Fig. 51 This print, *Franklin Opening the Lodge*, was published by Kurz and Allison of Chicago and dates to 1896

In 1760 Franklin was elected to the Council of the Royal Society. Towards the end of year it is recorded in the *Minute Book* that Franklin was present at the Grand Lodge of England, held at the Crown & Anchor, London 17 November 1760.⁴⁵⁰ The year before he was present at the Lodge Saint David at Edinburgh in Scotland as well as receiving the Degree of LL.D. at St Andrew's University and Freedom of the city of Edinburgh.

His Masonic authority H. T. C. De Lafontaine remarks that it is interesting to note that during his stay in London in 1757 Franklin made special efforts in making the acquaintance of David Garrick the greatest Shakespearean actor of the age 'Garrick, who was then in the meridian of his power and fame, greatly attracted Franklin'.⁴⁵¹ It was Freemason David Garrick who organized the Grand Shakespeare Jubilee of 1769 which put Stratford-upon-Avon, home of William Shakspeare, as the false centre of the Shakespeare world on the map, a Rosicrucian-Freemasonic *ludibrium*, that still fools and deceives nearly all and sundry around the Shakespearean globe to the present day. Franklin was equally keen to seek out the company of Dr Samuel Johnson the editor of the eight volume 1765 edition of the Shakespeare works (also filled with Baconian-Rosicrucian ciphers). Franklin regularly met his fellow Freemasons Garrick and Dr Johnson and kept up a correspondence with both of them for many years after.⁴⁵²

During his time in Paris Franklin was viewed by the French people as a national icon who personified the Freemasonic principles of Liberty, Equality, and Fraternity. Able to move freely through the secret Freemasonic networks of England and Europe, Franklin was appointed to the Committee of Congress for Secret Correspondence set up for the purpose of establishing a network of contacts sympathetic to the colonists' cause 'It was to operate extensively through Freemasonic channels and to lead to the creation of an elaborate spy network. At the same time, and quite coincidentally, it was to overlap a British spy network which ran parallel to it and also operated through Freemasonic channels. Both networks were to be based primarily in Paris, which became the centre for a vast web of espionage, intrigue and shifting allegiances.'⁴⁵³ These secret contacts proved invaluable for the Rosicrucian-Freemasonic birth and eventual success of American independence.

While in Paris in 1778 Franklin became a member of the celebrated French Lodge of the Nine Sisters where he assisted in the initiation of Voltaire and a year later on 21 May 1779 he became Master of the Lodge, which he served for two years.⁴⁵⁴ The nomenclature Nine Sisters is a Freemasonic allusion to the nine muses, patrons of the arts and sciences 'The Nine Muses were patrons of music, song, poetry, and of those sciences and fine arts generally which tend to advance man's culture and civilization. Hence they appropriately symbolize Freemasonry which teaches a "beautiful system of morality, veiled in allegory and illustrated by symbols."⁴⁵⁵ In 1782 he also became a member of the ultra-secret and 'elusive and mysterious Freemasonic conclave '*Royale Loge des Commandeurs du Temple, a l'Ouest de Carcassone* ('Royal Lodge of Commanders of the Temple West of Carcassone').⁴⁵⁶ During the second year of Franklin's mastership of the Lodge of the Nine Sisters 'an event of some importance took place. This was the foundation, through the agency of the Lodge, of an artistic Society known as the *Societe Appollonienne*. This was really a sort of off shoot of the Lodge, and it eventually led to the foundation of the *Muse de Paris*.'⁴⁵⁷ Heline notes 'Paris was now the centre of Egyptian Masonry and occultism flourished everywhere. The [purpose of the]...deeply esoteric Appollonian Society...was yet again to further his lifelong dream of uniting science with religion. The society celebrated his eighty-third birthday by the erection of his statue crowned with myrtle and laurel.'⁴⁵⁸ During this period and beyond a number of other English and European Freemasonic Lodges were named after the Nine Muses, including The Lodge of the Nine Muses, chartered

by the Grand Lodge of England on 25 March 1777.⁴⁵⁹ The Nine Muses were born at the foot of the divine and heavenly Mount Olympus: Clio was the Muse of history; Thalia of comedy; Melpomene of tragedy; Calliope of epic poetry; Euterpe of lyric poetry; Terpsichore of dance and song; Polyhymnia of hymns; Erato of love poetry and Urania of astronomy. The leader of the Nine Muses was Apollo (Phoebus), the god of poetry, music, and prophecy, who resided with them on Mount Parnassus.

Shortly after the supposed death of Francis Bacon in 1626 his private secretary and Rosicrucian Brother Dr William Rawley issued the *Memoriae Honoratissimi Domini Francisci, Baronis De Verulamio, Vice-Comitis Sancti Albani Sacrum* containing thirty-two Latin elegies wherein eleven of the versifiers held Bacon up as the leader of Apollo and the Nine Muses.⁴⁶⁰ Herein he is called another Apollo, described as greater than Apollo, and said that Apollo was fearful Bacon would replace him as King of the Muses. In elegy XII we are unreservedly informed that Bacon is Apollo ‘How has it happened to us, the disciples of the Muses, that Apollo, the leader of the choir, should die?’ and in Elegy XXI ‘Apollo, the darling, learned Bacon, of your native land’. In Elegy XXIII Bacon is portrayed as the leader of Apollo and the Muses ‘Think you, foolish traveller, that the leader of the choir of the Muses and of Phoebus is interred in the cold marble?’ and in elegy XX Bacon has replaced Apollo the god of poetry as the tenth muse ‘O Bacon! none, trust me, none will there be. Lament now sincerely, O Clio! and sisters of Clio, ah! the tenth muse and the glory of the choir has perished.’ Likewise, the muses are directly referred to on thirteen occasions:

Elegy II

...which the power of great Bacon brought forth, a muse more rare than the nine muses...⁴⁶¹

Elegy IV

The Columbus of Apollo with his lordly crew passes beyond the Pillars of Hercules in order to bestow a new world and new arts. . .Come, mourning Muses, gather frankincense from the heights of Libanus.⁴⁶²

Elegy V

Wherefore, ye Muses, would you cultivate the useless laurels of your sad garden?. . .He hath left the living, whom alone it was wont to bear the laurel crown for. Verulam reigning in the citadel of the gods shines with a golden crown;...Than whom no inhabitant of Earth was master of greater intellectual gifts; nor does any survivor so skilfully unite Themis and Pallas. While he flourished the sacred choir of the Muses influenced by these arts poured forth all their eloquence in his praise....⁴⁶³

Elegy IX

Muses pour forth your perennial waters in lamentations, and let Apollo shed tears (plentiful as the water) which even the Castalian stream contains...⁴⁶⁴

Elegy XII

How has it happened to us, the disciples of the Muses, that Apollo, the leader of our choir, should die?⁴⁶⁵

Elegy XVIII

The day-star of the Muses has set before his hour!...Melpomene rebuking would not endure this; and addressed the dire goddesses in these words:-“Atropos, never before truly cruel; take the whole world, only give me back my Phoebus. Ah! woe is me! neither heaven, nor death, nor the muse O Bacon! nor my prayers prevented your doom.”⁴⁶⁶

Elegy XIX

...O Bacon! as much as you have given to the world and to the Muses, or if you mean to be a creditor, love, the world, the Muses, Jove’s treasury, prayers, heaven, poetry, incense, grief will stop payment.⁴⁶⁷

Elegy XX

...O Bacon! none, trust me, none will there be. Lament now sincerely, O Clio! and sisters of Clio, ah! the tenth Muse and the glory of the choir has perished. Ah! never before has Apollo himself been truly unhappy! Whence will there be another to love him so? Ah! he is no longer going to have the full number; and unavoidable is it now for Apollo to be content with nine Muses.⁴⁶⁸

Elegy XXIII

Think you, foolish traveller, that the leader of the choir of the Muses and of Phoebus is interred in the cold marble? Away, you are deceived. The Verulamian star now glitters in ruddy Olympus....⁴⁶⁹

Elegy XXIX

....And you, who were able to immortalize the Muses, could you die yourself, O Bacon?⁴⁷⁰

Elegy XXX

....and the fountain of the Muses shall have become dry, resolving itself into tiny tears.⁴⁷¹

Elegy XXXI

...so Death relentless on a day hostile to the Muses smites this man much skilled in warding off a blow.⁴⁷²

Throughout the *Memoriae*, the elegies refer or allude to the great philosopher Francis Bacon as a secret concealed poet and dramatist, the writer of comedies and tragedies, a veritable Apollo, god of poetry and prophecy, who immortalised the Nine Muses. In the final elegy his friend the poet and dramatist Thomas Randolph, one of the sons of Ben Jonson whom while living with Bacon at Gorhambury contributed two verses to the Shakespeare First Folio, refers to Bacon as Quirinus revealing and confirming for those with eyes to see, that Bacon is Shakespeare:

Elegy XXXIII

While by dying the Verulamian demi-god is the cause of much sadness and weeping in the Muses...Assuredly the object of our sorrow cannot be in a state of felicity, since his Muses are grieving, and he loves not himself more than them...Are we to think then that the arts of Phoebus lay dormant and the herbs of the Clarian god were of no avail? Phoebus was as powerful as ever...But believe that Phoebus withheld his healing hand from his rival, because he feared his becoming King of the Muses. . .

See! how plentiful the flood! I acknowledge these for genuine Muses and their tears. One Helicon will scarce equal them; Parnassus, not covered by Deucalion's flood, will, wonderful to say, be hidden beneath these waters...When he perceived that the arts were held by no roots, and like seed scattered on the surface of the soil were withering away, he taught the Pegasean arts to grow, as grew the spear of Quirinus [*Spear/Spearman*; i.e., *Shakespeare*] swiftly into a laurel tree. Therefore since he has taught the Heliconian goddesses to flourish no lapse of ages shall dim his glory. The ardour of his noble heart could bear no longer that you, divine Minerva [*Pallas Athena the Shaker of the Spear who wore an helmet which rendered her invisible*], should be despised. His godlike pen restored your wonted honour and as another Apollo [*leader of the Nine Muses presiding over the different kinds of poetry and liberal arts*] dispelled the clouds that hid you.⁴⁷³

Following his time as Master of the Lodge of the Nine Sisters in 1782 Franklin also became a member of the Respectable Lodge de Saint Jean de Jerusalem where he was made Master of the Lodge three years later. He was also elected honorary member of the Lodge des Bon Amis of Rouen, France in 1785.⁴⁷⁴

Nearly all the important Founding Fathers of the United States of America and future US Presidents including George Washington, James Madison and Thomas Jefferson, (whose idol was Bacon) were intimately familiar with cryptographic methods and frequently used codes and ciphers in their secret communications. This of course was also the case with the Freemason and Founding Father of the US Benjamin Franklin:

Other emissaries used systems of secret communications while the America that they were representing was little more than thirteen united colonies. Benjamin Franklin, while in France, in 1781, assigned consecutive numbers to each of the 682 letters and punctuation marks in a long passage in French to concoct a homophonic substitution cipher....⁴⁷⁵

When he returned to home to Philadelphia in 1785 Franklin held a position equal to his fellow Freemason George Washington as the hero of American Independence. He was the only statesman to sign all three fundamental documents of US independence: the *Declaration of Independence* (1776), *The Treaty of Paris* (1783) finally ending the War of American Revolution and the *United States Constitution* (1787), the document that established the national frame of government for the United States of America. On 17 April 1790 the great Benjamin Franklin died at his home in Philadelphia and the whole of the first Federal Republic of the Modern World went into mourning.

By his own words his guiding principle was the common good of humankind and that all humankind are of one family which is reminiscent of the Rosicrucian manifestos anonymously written by Lord Bacon, the true Founding Father of the United States of America, issued with the divine statement of intent *The Universal Reformation of the Whole World*, whose Utopian manifesto *New Atlantis (Land of the Rosicrucians)*, was the secret blueprint for the United States of America.

In homage to his great ancestor Benjamin Franklin, the originator of the magnificent and unique Folger Shakespeare Library, Henry Clay Folger:

maintained that had he not collected Shakespeareana, he would have collected Frankliniana.⁴⁷⁶

The Founding Father of the Folger Shakespeare Library Henry Clay Folger was born in New York City on 18 June 1857 the eldest son of Henry Clay Folger of Nantucket, Massachusetts and Eliza Jane Folger, descended on his father's side from Peter Folger

whose daughter Abiah, was the mother of the leading Freemason and Founding Father of the United States, Benjamin Folger Franklin.

From his young schooldays in New York Henry Clay Folger showed early academic acumen and a wide interest in classical and modern literature. In 1875 he entered the prestigious Amherst College, Massachusetts and for a Christmas present in his freshman year his brother gifted him a single volume edition of Shakespeare's *Complete Works* which still survives full of quotations about our immortal poet by some of Folger's contemporaries, among them the President of the United States Abraham Lincoln and especially Ralph Waldo Emerson, filled in by Folger over a period of many years. He quoted the great American poet and philosopher Emerson more than any other author with most of the passages taken from 'Shakespeare; or the Poet' from *Representative Men* (1850).⁴⁷⁷ His future wife Emily 'considered that Henry's epiphany' about the greatness of Shakespeare, which marked the true beginning of his lifetime passion for the poet, occurred on 19 March 1879 'when he sat on the edge of seat 33A [perhaps another piece of serendipity: 33 is Bacon in simple cipher] in Amherst's College Hall' for a lecture delivered by the poet and philosopher Ralph Waldo Emerson on 'Superlative or Mental Temperance', that writes his biographer, had a 'profound, lasting impact' on Folger.⁴⁷⁸

The poet and essayist Emerson had earlier given a series of lectures on Bacon and Shakespeare. In Bacon he discovered a universal man with a 'universal mind' one that saw 'what all saw and also what few see and what none understand' who 'conceived more highly than perhaps did any other of the office of Literary Man'.⁴⁷⁹ Emerson later corresponded, met and became an active patron of Delia Bacon, who had sent him an outline of her ideas on the true meaning of the Shakespeare plays. The immortal plays teeming with profound learning were not the work of William Shakspeare of Stratford rather the New Philosophy so closely associated with Lord Bacon and a secret circle of Elizabethan wits shared a combined vision of freeing the world from the bondage of darkness and ignorance, and for future generations, wished to build a New World. Some years prior to Delia Bacon making known to Emerson her own firm convictions regarding the embarrassing absurdity of the Stratford myth, Emerson had expressed in *Representative Men* his own complete wonder at the discrepancy between the life of the Stratford man and the sublime Shakespeare plays:

I cannot marry this fact to his verse: Other admirable men led lives in some sort of keeping with their thought, but this man in wide contrast.⁴⁸⁰

In his junior year at Amherst College Folger was elected to the Phi Beta Kappa the oldest academic society in the United States of America. In Bacon's *New Atlantis* in their great college of Salomon's House (Solomon's Temple-the central founding myth of the Freemasonry Brotherhood) its divine Rosicrucian philosopher-scientists pursue research in all the arts and sciences for the future benefit of humankind. In similar vein the aims of Phi Beta Kappa is to promote and advance excellence in the liberal arts and sciences and induct the most accomplished students of the arts and sciences from elite American colleges and universities.

The fraternity of Phi Beta Kappa was founded at the College of William and Mary in 1776 and was the alma mater of several early American presidents, Thomas Jefferson (whose hero was Lord Bacon); James Monroe, who received the Entered Apprentice degree in Williamsburg, Lodge No. 6, while a student at the College of William and Mary, and most likely received his 2nd and 3rd degrees at St John's Lodge; and John Tyler, the tenth President of the United States. The college was also alma mater to the

first President of the Continental Congress Peyton Randolph, Grand Master of the Lodge at Williamsburg, Virginia (No.6) in a warrant from Lord Petrie, Grand Master of the Grand Lodge of England; the first US Attorney-General Edmund Randolph, Charter Master of the Jerusalem Lodge No. 54 and Grand Master of the Grand Lodge of Virginia; the US Supreme Court Chief Justice John Marshall known as the ‘Father of the Judiciary’, Grand Master of the Grand Lodge of Virginia; sixteen members of the Continental Congress, many of whom were also Freemasons, and four signatories of the Declaration of Independence. This earned the College of William and Mary the moniker ‘the Alma Mater of the Nation’. Folger’s ancestor and Freemason Benjamin Franklin received William and Mary’s first honorary degree in 1756 and his Brother George Washington, the most famous Freemason in American history, became its first American chancellor in 1788.⁴⁸¹ All through its glorious history innumerable members of Phi Beta Kappa have continued to go on to become Freemasons.

On graduating from Amherst in 1879 Phi Beta Kappa Henry Clay Folger joined Charles Pratt & Company-aligned with Standard Oil-while pursuing a law degree at Columbia University. He received his law degree in 1881 and was admitted to the New York bar but never practised as an attorney. During these years he met his future wife Emily Clara Jordan (1858-1936), a graduate from Vassar College and the two of them later married in 1885.

She too came from a distinguished American family. Her father Edward W. Jordan a newspaper editor and lawyer, was the solicitor of the US Treasury under President Abraham Lincoln (who many believe was a Freemason) and Vice-President Andrew Johnson, who was a Freemason.⁴⁸² Vice-President Johnson replaced his predecessor Lincoln as the seventeenth President of the United States in 1865. He was initiated in the Greeneville Lodge, Tennessee, No. 119 and from 1867 received the 4th through to the 32nd degrees of the Scottish Rite, thereby becoming the first president to receive the Scottish Rite degrees.⁴⁸³ At the time the Jordan family lived in Washington and her father Edward once took Emily to meet President Lincoln at the White House.⁴⁸⁴ After the family relocated, along with her sisters Mary Augusta and Elizabeth, Emily went to Miss Ranney’s School in Elizabeth, New Jersey. Her brother Francis, named after the great philosopher-poet Francis Bacon, studied law,⁴⁸⁵ the discipline in which Bacon excelled (occupying the positions of solicitor-general, attorney-general, Lord Keeper and Lord Chancellor), whose Shakespeare plays display an intimate familiarity with the principles and practices of all the major branches of law: common law, civil law, statute law, the maxims of English law, as well as its complex technicalities, customs and jurisprudence.⁴⁸⁶

In 1875, Emily followed her sisters Mary Augusta and Elizabeth by entering Vassar College winning a Phi Beta Kappa golden key engraved with the letters SP the initials of the Latin words *Societas Philosophiae* (society of philosophy) and on the other side the Greek letters PBK for Phi Beta Kappa meaning ‘Love of wisdom is the guide of life’. A pointing finger symbolises the ambition of its members to attain the principles of friendship, morality and learning which are represented by three stars (3 letters and 3 stars: a possible allusion to the number 33 which is Bacon in simple cipher). Emily excelled in English literature and her classmate Sophia Richardson, secretary of the Shakespeare Club invited her to become a member on 28 September 1876.⁴⁸⁷ She was educated at Vassar by Professor Maria Mitchell an endearing character beloved by her students born in a Quaker family in Nantucket, a descendant of Peter Folger who had travelled to the New World with his father John Folger born in 1594 in the county of Norfolk, the political stronghold of the prominent Bacon family, whose famous scion Francis Bacon served as Member of Parliament for Ipswich in 1597, 1601, 1604 and

1610. It may well have been some kind of divine serendipity that her commencement day at Vassar on 25 June 1879, departing as the president of her class, was the same day her future husband Henry Folger graduated from Amherst.⁴⁸⁸

On 6 October 1885 Henry and Emily were married in the Westminster Presbyterian Church in Elizabeth, New Jersey. It was a match made in Shakespearean heaven. His new bride Emily shared her husband's passion for Shakespeare and in the following years the two of them conceived and developed a far reaching idea that would lead all the way to the magnificent Folger Shakespeare Library. This all lay in the future as the fabled couple settled into their new lives. Now working for Standard Oil owned by John D. Rockefeller in 1886 Henry who had impressed at the company through his skills as a mathematician and statistician with his scrupulous management of its data was appointed secretary of its manufacturing committee. His consummate knowledge of the oil business found expression in an article entitled *Petroleum: Its Production in Pennsylvania*, written for *Chambers' Encyclopaedia*. He was already a man destined for the very top and in the years ahead he enjoyed a stellar rise in the oil business and the money derived from it he used to build the greatest Shakespearean collection the world has ever seen. In the 1890s Emily keen to deepen and broaden her knowledge on all things Shakespeare decided to return to college for further study. With the kind of forward planning and preparation that characterised the Folgers she wrote to the renowned American scholar Horace Howard Furness the editor of the New Variorum editions of Shakespeare requesting him to provide her with a reading list to enable her to work towards an advance degree course on the bard which marked the beginning of a lifelong relationship with Horace and Helen Furness, the golden Shakespeare couple of America.⁴⁸⁹ Her distinguished and eminent mentor Dr Furness was also a lecturer at the University of Pennsylvania whose largest city Philadelphia is home to the Folgers' illustrious ancestor and Freemasonic Father of the United States of America Benjamin Franklin. As a predecessor to the Folger Shakespeare Library Dr Furness was himself a celebrated collector of rare Shakespeare folios and quartos as part of a collection of several thousand Shakespeare editions and works reputed to be the most complete in the United States. The renowned scholar and collector Dr Furness was a trustee of the University of Pennsylvania and chairman of the building committee for its library designed by his brother Frank Horace. In 1887 the trustees authorized plans for a new library and in July directed Dr Furness to directly organize the ceremony for laying the cornerstone. On 15 October 1888 around three hundred invited guests joined the Provost, trustees, other university dignitaries, and special officers of the Grand Lodge of Free and Accepted Masons of Pennsylvania:⁴⁹⁰

The Provost and Trustees of the University, together with the Right Worshipful Grand Lodge of Free and Accepted Masons of Pennsylvania, assembled in the chapel and proceeded to the site of the Library building. The Grand Lodge took its place on the platform, and the Officers and Trustees of the University took their places on the north side. The Provost presided. The Grand Master thanked the Trustees "For the honor paid to the Craft, in their invitation to lay the corner-stone," and then the Lodge proceeded to perform that duty according to their ancient usages and customs.⁴⁹¹

The ceremony concluded with an address by Dr Furness, who pays stirring tribute to the educational interests (and it might be added the long little known Shakespearean interests) of the noble Brethren, punctuated with Baconian-Rosicrucian-Freemasonic imagery and language:

The founding of a Library is a momentous, even solemn event. It consecrates a building to the preservation of the intellect of the past and of the present. It gives a permanent habitation to the fleeting thoughts that have stirred or soothed men's minds, and are here garnered for the service of all. It is the wealth here stored that is indestructible; all other wealth that can be heaped up may take to its wings and fly away. Intellectual wealth is alone permanent, and affords the standard of a nation's power. A nation without libraries is a nation without books; and a nation without books vanishes from the earth, and we have to send forth expeditions with shovel and spade to exhume its scanty traces. The fight of light against darkness, the battles of knowledge, the wings whereby we fly to heaven, against ignorance which is the curse of God, are all fought outside in the world, but a library is the armoury where the weapons are stored, and where the campaigns are planned. If we are the heirs of all the ages, it is in libraries that our inheritance is recorded, and to them we resort to enter on possession.

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He headed the committee responsible for the library until January 1896 the year in which his charge Emily Folger, whose study and progress he had monitored, received her MA from Vassar, further cementing the Folgers personal relationship with Horace and Helen Furness, whose all consuming passion for Shakespeare matched their own.

In the meantime the Folgers spent a number of years attending lectures and reading everything they could on the immortal bard including *The Philosophy of the Plays of Shakespeare Unfolded* by Delia Bacon and various other Baconian works. Around the time of their marriage the Folgers purchased a copy of the Halliwell-Phillips facsimile edition of the First Folio which became the cornerstone of their Shakespeare collection and future library. In 1889 Henry made his first appearance in an auction house and purchased a copy of an original Shakespeare Fourth Folio for \$107.50. It served as another noteworthy milestone on the road to the great purchases to come.

In 1897 they purchased their first major collection in the form of the outstanding Shakespeare library originally belonging to nineteenth century Shakespeare scholar Halliwell-Phillips. The collection had previously been sold to the Earl of Warwick in the 1850s. The complex negotiations and purchase of the collection was conducted in strict secrecy with the use of codes to conceal information from possible prying eyes:

Utmost secrecy surrounded a flurry of correspondence, which Folger signed with the code name "Golfer." His messages use other coded terms: Roboro (telegram received); Obsono (offer is accepted); Aspico (commission will be allowed of.....).⁴⁹³

The Earl of Warwick eventually accepted Folger's offer of £10,000 for the collection that included copies of the first four Shakespeare Folios and some twenty-six quarto editions including *The Merchant of Venice* and *Romeo and Juliet*.

Its purchaser Henry Folger, a keeper of secrets, was a secretive man by nature and carried out most of his important purchases in secret, often with his identity concealed behind trusted book dealers and other intermediaries who maintained his anonymity with the major auction houses and individuals. He carried out his transaction for the Warwick Castle Library 'in such secrecy' it was not reported by the *Times Literary Supplement* until another two decades later in 1923, and although the *New York Times* listed *The Merchant of Venice* quarto among the sales in 1897, it did not provide the name of purchaser.⁴⁹⁴

More purchases of quarto editions followed with the unique copy of the 1594 quarto edition of *Titus Andronicus* discovered of all places in Sweden in 1905. On hearing of its discovery by reading about it in the *New York Times* Folger sent instructions to his trusted agent in London, Henry Sotheran, to immediately despatch a representative to

Lund to manage its purchase, a transaction finally secured by the sum of \$2,000 when his agent informed the seller, his buyer was prepared to pay cash.⁴⁹⁵ This was and still is the only surviving copy of the first printed 1594 quarto edition of *Titus Andronicus*. A few years later in 1909 a rare and unusual collection of Shakespeare quartos eluded Folger which included a rare copy of the third quarto edition of *Titus Andronicus*. It was found among eight Shakespeare quartos at Gorhambury most likely transferred over from Bacon's personal library in the old Gorhambury House: *Romeo and Juliet* (1599), *Richard III* (1602), *Hamlet* (1605), *King Lear* (1608), *The First and second Part of the Troublesome Raigne of John, King of England* (1611), *Titus Andronicus* (1611), *The History of Henry the fourth* (1613) and *The Tragedy of King Richard the Second* (1615). These eight quartos were transferred for safe-keeping into the care of Bodleian Library, where they remain to the present day.⁴⁹⁶ Could you just imagine the headlines around the world if eight original Shakespeare quartos were discovered in the house of William Shakspere of Stratford or one of his relatives or descendants!

The purchase of the major library known as the Halliwell-Phillipps Shakespearean Rarities was also 'shrouded in some secrecy'. Part of it had been originally sold to another collector Marsden J. Perry, a rich financier descended from Richard Perry, a grantee of the Massachusetts Bay Company and John Brown, a founding father of Rhode Island. In 1919 Perry sold his Shakespeare collection to the major American legendary bookseller A.S.W. Rosenbach. He wasted no time personally travelling to the 'Tower of Secrecy' headquarters of the Standard Oil Company where an executive committee was in session. Rosenbach gave a note to be urgently handed to Folger to the secretary and on its receipt the excited President of Standard Oil of New York rushed out of the session. In a moment of great excitement Folger breathlessly asked 'Will you give me first choice? I particularly want the 1619 volume that belonged to Edward Gwynne [seventeenth century book buyer]',⁴⁹⁷ the earliest unique compilation of Shakespeare quartos known as the False Folio published four years before the First Folio by the same printer William Jaggard. For this once in a lifetime opportunity of obtaining the Shakespearean quartos bound together by Edward Gwynne Folger paid the enormous sum of \$100,000, at the time, a world-record price paid for a book.⁴⁹⁸

It is little known that Francis Bacon had a secret, hidden and obscured relationship with the Jaggards over a period of two decades. From 1606 John Jaggard published a series of Bacon's *Essays* one of which was printed by his brother William Jaggard. The Shakespeare First Folio was printed and published by William and Isaac Jaggard in November 1623. Elizabeth Jaggard (John's wife) reprinted Bacon's *Essays* in 1624. At the time of Bacon's recorded death the Jaggards owned the copyright to his *Essays* and partly owned the copyright to his Shakespeare First Folio.⁴⁹⁹

During the decades leading up to the opening of the Folger Shakespeare Library the Folders usually in secret were continually adding to their collection of First, Second, Third and Fourth Shakespeare Folios steadily gathering together the largest collection of Shakespeare Folios in the world.

Sometime in the second decade of the twentieth century Henry and Emily Folger began thinking about and planning for a library to house their enormous collection of Shakespeareana all hidden away in secret New York warehouses whose contents were virtually unknown to the rest of the Shakespeare world. They began pondering over a location for the library. For sentimental reasons the Folders considered Nantucket, the ancestral home of Peter Folger, born in the Bacon family stronghold of Norfolk, who twelve years after the publication of the Shakespeare First Folio and three years after the publication of the Second Folio, emigrated from Norwich to Massachusetts in the New World, founded by Bacon and his Rosicrucian-Freemasonic Brotherhood. The

possibility of Manhattan in New York was looked into but for practical and financial reasons it proved unrealistic. The University of Chicago situated in the same state that was home to the Riverbank Laboratories, where Elizabeth Wells Gallup with William and Elizebeth Friedman were studying the presence of Bacon's Bi-literal Cipher in the Shakespeare works, offered to construct a building to house the library, if the Folgers agreed to donate their collection to the city. The Folgers repeatedly rejected appeals from Stratford the birthplace of the illiterate Shakspeare, the literary mask for Bacon's secret concealed authorship of the Shakespeare works. In the end Folger said 'I finally concluded I would give it to Washington; for I am an American'.⁵⁰⁰ The only question now was how to proceed and Henry Folger did so the only way he knew how with the same *modus operandi* that characterised his whole life, in secret:

Henry Folger acquired the Property for his Shakespeare Library through patience, secrecy and subterfuge.⁵⁰¹

While travelling to Hot Springs in Virginia in 1918 the Folgers briefly stopped over in Washington DC which provided them the opportunity to look around the Jefferson Building of the Library of Congress over the street from the Capitol, the seat of the United States Congress, the legislative branch of the US federal government. It would be here in the very heart of the Capitol Hill district on East Capitol Street the Folgers decided to build the Folger Shakespeare Library across from the Library of Congress, raised phoenix-like on 6,487 volumes of Thomas Jefferson's personal library, then the largest private library in America.

On graduating from the William and Mary College Thomas Jefferson was admitted to the bar successfully practicing law for seven years before entering public life. From 1769 he served in the Virginia House of Burgesses and in 1775 became one of Virginia's Delegates to the Continental Congress. While only thirty-three years old he was elected with Adams, Franklin, Roger Sherman and Roger R. Livingstone to the committee which drew up the Declaration of Independence. A man of great learning with a reputation as a universal scholar Jefferson possessed a magnificent library for which he drew up a catalogue arranged by subject matter rather than alphabetically:

He found a basis for his system in Lord Bacon's "table of sciences." Following the division of the faculties of the mind into memory, reason, and imagination, he classified his books under the corresponding headings of history, philosophy, and the fine arts. He drew subdivisions under each, making more detailed provisions for works on law, government, and political history than a theologian or physician would have done. He wanted a well-rounded collection and listed not merely what he had but also numerous titles he intended to acquire. His library was that of a practising statesman, but he would neglect nothing important in any field.⁵⁰²

As well as his love of learning and reading Jefferson had a penchant for collecting paintings and busts of men whom he most admired a fondness for which he enlisted the services of John Trumbull, to acquire from England on his behalf, paintings and busts of Bacon, Shakespeare, Locke and Newton all essential reading for a American statesman:

To John Trumbull

DEAR SIR
1788.

Paris Feb. 15.

I have duly received your favor of the 5th. inst. with respect to the busts and pictures. I will put off till my return from America all of them except Bacon, Locke and Newton, whose

pictures I will trouble you to have copied for me: and as I consider them as the three greatest men that have ever lived, without any exception, and as having laid the foundation of those superstructures which have been raised in the Physical and Moral sciences, I would wish to form them into a knot on the same canvas, that they may not be confounded at all with the herd of other great men. To do this I suppose we need only desire the copyist to draw the three busts in three ovals all contained in a larger oval in some such forms as this [Ed. Jefferson is here referring to an accompanying diagram] each bust to be the size of the life. . .

TH: JEFFERSON

[In the margin opposite the diagram Jefferson wrote: "Bacon at top Locke next then Newton."]⁵⁰³

Believed by many to be secretly closely associated with the Rosicrucian-Freemasonry Brotherhood, President Jefferson shared with his hero Lord Bacon, an extraordinary knowledge of secret writing. He was familiar with Bacon's comments on ciphers in *The Advancement of Learning* which Bacon afterwards greatly expanded upon in *De Augmentis Scientiarum* and possibly the comments of his editor Tenison about the bi-literal cipher and his statement those who were familiar with Bacon's writings would know if he were the author whether his name be to it or not (meaning his Shakespeare works). Such was the importance of Jefferson's construction of one original cipher it earned for him the title of Father of American Cryptography:

One cipher system invented before the telegraph was so far ahead of its time, and so much in the spirit of the later inventions, that it deserves to be classed with them. Indeed, it deserves the front rank among them, for this system was beyond doubt the most remarkable of all. So well-conceived was it that today, more than a century and a half of rapid technological progress after its invention, it remains in active use.

But then it was invented by a remarkable man...Thomas Jefferson. He called it his "wheel cypher," and it seems likely that he invented it either during 1790 to 1793 or during 1797 to 1800....

.....It was not rediscovered among his papers in the Library of Congress until 1922, coincidentally the year the U.S. Army adopted an almost identical device that had been independently invented. Later, other branches of the American government used the Jefferson system, generally slightly modified, and it often defeated the best efforts of the 20th-century cryptanalysts who tried to break it down! To this day the Navy uses it. This is a remarkable longevity. So important is his system that it confers upon Jefferson the title of Father of American Cryptography. And so original is it that it sets Jefferson upon a pedestal far more prominent than those accorded to men like Vigenère and Cardano, whose names are usually thought to be household words in the history of secret writing.⁵⁰⁴

The Folgers spent the next nine years purchasing fourteen houses that occupied the block of East Capitol Street known as Grant's Row hiding behind lawyers, advisers and estate agents, to maintain secrecy and anonymity. In fact so secret was this process that the names of Henry and Emily Folger 'appeared on no official document connected with the home sales':⁵⁰⁵

He would buy the parcels in secret. Front men acting on his behalf would negotiate with the owners and buy all the land. Only then, once he controlled the whole block, would Folger reveal his plan.⁵⁰⁶

Everything seemed to be going to plan until in January 1928 a spanner was thrown into the works when the Folgers learned of a bill pending in Congress that would give their Grant Row properties and another adjacent block to the Library of Congress for

a planned new annex building. Dismayed by this unexpected turn of events Henry contacted the Librarian of Congress, Herbert Putman, in an attempt to persuade him of the advantages of a new library containing the greatest collection of Shakespeare works in the world situated here in Washington that would complement the Library of Congress, one following Jefferson's method organized around Bacon's system of the faculties of the mind of memory, reason and imagination. And, of course, no one had a greater imagination than the true author of the Shakespeare works. A man of vision himself, Putnam, immediately grasped the cultural importance and significance for Washington of a new Shakespeare library as did Robert Luce, Chairman of the House Committee on the Library, who proved instrumental in getting an amended bill through Congress. In early May 1928 the bill passed unanimously through the House of Representatives and a week later also unanimously through the Senate. On 21 May President Coolidge signed the bill into law which allowed the Library of Congress to acquire the southern half of square no. 760 and all of square no. 761 for the annex with the northern half of square 760 allocated for the Folgers project of a Shakespeare library, just across from the future Supreme Court,⁵⁰⁷ the highest arbiter of law and jurisprudence based on the Anglo-American tradition, ultimately derived from Bacon and his writings on law:

It is more than serendipitous that the two libraries sit across from one another within sight of the Capitol.⁵⁰⁸

In 1928 Folger resigned as chairman of Standard Oil of New York to dedicate his time and energies to the building of his monument to Shakespeare in which he closely involved himself in every aspect of its planning, design and build, down to the last detail. It was customary for the Freemasonry Brotherhood to lay the cornerstone of important public buildings, a tradition that included the laying of the cornerstones of the Whitehouse and the United States Capitol, in ceremonies overseen by President and Freemason George Washington, in 1792 and 1793 respectively, in a city built by the Rosicrucian-Freemasonry Brotherhood who carefully watch over Washington DC and the Folger Shakespeare Library to the present day.

The founder of the Folger Shakespeare Library Henry Folger was very familiar with the secret concealed life and writings of the Founder of the Rosicrucian-Freemasonry Brotherhood Francis Bacon and Founding Father of the United States America. The whole Shakespeare world knows that Henry Folger obsessively collected all things Shakespearean but what is not widely known is that he also obsessively collected the largest collection of Baconiana ever assembled under one roof. He was fully aware of the Bacon-Shakespeare controversy and he and his wife Emily, whose brother Francis was named after Bacon, were widely read and well-versed in the subject:

Folger always intended to allot Sir Francis Bacon a prominent place in his library, given his important contribution to English literature and thought. Rosenbach called the Folger collection of Baconiana "the most extensive ever gathered." Henry became a member of the Bacon Society of America at its creation in 1923. (Emily's brother Francis was named after Francis Bacon.) Folger purchased books (including over four hundred from William T. Smedley's library), notes, and autograph letters related to Bacon. He brought several items from Bacon's personal library, many with the author's annotations. He questioned whether some of these were genuine, however, and declined to buy certain Bacon items if their relationship to Shakespeare seemed too remote.⁵⁰⁹

The newly inaugurated The Bacon Society of America held its first general meeting in New York City at the rooms of the National Arts Club on 15 May 1922. It announced that in these times of amazing discoveries and inventions it was fitting to recognize ‘the incalculable debt which mankind owes to the prodigious genius and indefatigable labours of the world’s greatest modern philosopher, FRANCIS BACON’. The society aimed to study his life and works and ‘Bacon’s connection with the Shakespeare plays and poems’ as well as his little known part in the first permanent English settlement at Jamestown, Virginia.⁵¹⁰ This of course would have very much interested and intrigued Henry Folger as his British ancestors were then living in East Anglia the stronghold of the Bacon family, whose favourite son Francis Bacon, represented Ipswich from 1597 to 1610, during a period when Shakespeare quartos were being published in London and in the following decade the much coveted 1623 Shakespeare First Folio a book he would eventually end up owning more copies than anyone else in the world.

In fact to celebrate its first publication in 1923, the three hundred year anniversary of the publication of the Shakespeare First Folio, it received a Letter of Greeting from The Bacon Society of Great Britain to the Bacon Society of America ‘We join hands with you across the sea in sending you an article by our president.’⁵¹¹ The article by the President of the Bacon Society of Great Britain the Right Honourable Sir John A. Cockburn entitled ‘FRANCIS BACON The Founder of the New World’ most aptly had the honour of being the first article in the first edition of the *American Baconiana*:

He was the father of invention and well as America profited by his precepts, for it is through the facilities granted to inventive genius that the United States has attained her industrial greatness....

But the claim of Francis Bacon to the gratitude of America has a still more substantial and special basis. The part played by him in founding the American Colonies has been hitherto overlooked [and very curiously continues to be overlooked and suppressed by his orthodox biographers and commentators to the present day!]....

The Hon. James Beck, of the United States, in a recent speech to Gray’s Inn Hall, remarked that the two charters of government, which were the beginning of constitutionalism in America, and therefore the germ of the Constitution of the United States, were drawn up by Lord Bacon, and added that Bacon, “the immortal treasurer of Gray’s Inn,” visioned the future and predicted the growth of America....

...If the United States were to erect to the memory of Francis Bacon, Lord Verulam, Viscount St. Alban, a twin statue, as a noble and impressive as that of “Liberty,” which stands now at the portal of their ocean gateway, it would be no more than a just tribute to one whom they owe so much, and whom the intelligence of the world delights to honour.⁵¹²

In addition to greetings from The Bacon Society of Great Britain the newly formed Bacon Society of America received greetings from Francis Bacon societies in France, Germany and Austria, and an interesting letter from Dr H. A. W. Speckman, Professor of Mathematics at Arnhem in Holland. Dr Speckman had very kindly sent the Bacon Society of America a thirty-two page pamphlet entitled *The Origin of Free Masonry* ‘being a most interesting study of the influence and activities of Francis Bacon in the founding of the Society of Rosicrucians and later, of Modern Freemasonry’.⁵¹³ In a letter addressed to its president Willard Parker the learned Baconian Dr Speckman tells him he has carried out scientific and mathematical investigations into Bacon’s various cipher systems present in the Shakespeare works:

Dear Mr. Parker,

Your very kind letter of 11 Dec. was received by me today. And it was a very agreeable surprise to me to learn that the Bacon Society of America is not a co-operation of publishers

but a new-born society of American Baconians, on an equal footing with the Austrian Bacon-Shakespeare Society of which I have the pleasure of being an honorary member.

In 1914 my attention was drawn to the possibility of a cipher in the Shakespeare works and since that time I have studied all the Baconian works and the old cipher books. As a result I published in 1917-18 in a Dutch literary paper NEOPHILOLOGUS an article entitled 'Bacon's Fundamental Cipher Methods.' Since then I have published no more, but have continued my studies and applied these methods to various particular texts in the works of Bacon and his pseudonyms with the result, that I have found the complete deciphering. The first part will appear in the 'Mercure de France' in 1923.

...If I may send you from time to time some of my publications or unpublished decipherings, I will be happy, if you find them apt for publication in your periodical. In the first place I would wish that my article on the cipher of Bacon, revealed by Silenus and Vignere, would be taken into consideration to be published by the Bacon Society of America. Therein are mathematically given the foundations of Bacon's cipher methods.

I will send you soon a little paper for your periodical, which forms part of an article which will appear in *Mercure de France*.

I am, dear sir,

Yours very faithfully,

Dr. H. A. W. Speckman.⁵¹⁴

The Bacon Society of America was also presented with three copies of the *Mecure de France* containing three articles by General Cartier of the French Cipher Intelligence Department on the Bacon Bi-literal Cipher, wherein he had examined and confirmed the decipherments by Elizabeth Wells Gallup and the Riverbank Cipher Department headed by William and Elizebeth Friedman, discovered in the Shakespeare First Folio and other Elizabethan works.⁵¹⁵

The subject of the Shakespeare authorship which then meant the question of Bacon's authorship of the Shakespeare works formed a prominent part of the Folger collection. It was a permanent reminder of the Rosicrucian *ludibrium* (the comedy, farce, or joke) that the illiterate/semi-illiterate William Shakspeare was the author of the Shakespeare poems and plays-the greatest literature known to humankind. An illusion maintained in public by institutions, prestigious university presses, major publishing houses as well as the international media by well-placed professors, journalists and others who knew better in private or secret, who had sworn affiliations to an invisible Rosicrucian-Freemasonic Brotherhood. Who adopted a position in public which they knew to be untrue in private bound by a higher truth and allegiance to maintain an illusion that as Bacon articulated around the emblem on the title-page of his *New Atlantis (or Land of the Rosicrucians)*: 'Tempore Patet Occulta Veritas' ('In Time The Hidden Truth Will Be Revealed'). When Henry Folger was alive that time had not yet arrived. The year before he died Folger wrote to his British book dealer 'I...am coming towards the end of my interest in Bacon; for all the books I have seen, read by him, tend to prove that he could not have been in any way responsible for the Shakespeare Plays.'⁵¹⁶ Henry Folger founder and public face of the Folger Shakespeare Library was however more than capable of keeping secrets, maintaining appearances, and serving as a front for a company or institution.

While working for Standard Oil 'he willingly served as a front for his company in connection with an investment the company itself could not legally make',⁵¹⁷ perhaps not too dissimilar to William Shakspeare acting as a front for Lord Bacon as the author of the Shakespeare works. In a lawsuit relating to the activities of Standard Oil Folger himself actually testified he was a mere 'front' and as part of the proceedings he made a statement that was 'not believed' in a long legal process that 'in the end' was 'an elaborate charade' in which Folger played a leading and prominent role.⁵¹⁸

....he took part, showing that he could become a key and willing player in a high-stakes business on the margins of the law. Folger had a shadowy duality: he maintained his shy, respected place in the firm while loyally allowing himself to walk on the dark side to foster and protect Rockefeller's Texas interests.⁵¹⁹

In 1911 the Supreme Court ordered that the Standard Oil Company of New Jersey be broken up:

A Supreme Court spokesman announced the judgement in succinct terms: "Seven men and a corporate machine have seized unlawfully the second greatest mineral of this country, and are converting it into mountainous private fortunes. For the safety of the Republic, we now declare that this dangerous conspiracy must be ended by Nov. 15.

To comply with the decision, Standard Oil of New Jersey announced its breakup into thirty-four companies: the old parent company and thirty-three others. Stockholders of Standard Oil of New Jersey kept their proportionate stock ownership interests in that company; they also received the same proportionate stock ownership interests in each of the other thirty-three companies. The announcement of the breakup was signed on July 28, 1911, by Henry Folger as secretary of Standard Oil of New Jersey.⁵²⁰

The founder of the Folger Shakespeare Library was notoriously secretive, so much so that the 'secretiveness of', warranted its own entry on the index of *The Millionaire and the Bard*.⁵²¹ His secrecy was not only obsessive it bordered on the paranoia. Like Bacon before him if for different reasons Folger 'sought to maintain his anonymity' to keep among other things his name out of the media and throughout his life 'secrecy became one of his signature traits.'⁵²² His 'reflexive compulsion for secrecy' was an integral part of his secret life and character, and again not dissimilar to Bacon, 'for almost forty years he led a double life',⁵²³ one in private/secret and another in public. His compulsive secrecy had started early as part of Phi Beta Kappa, a secret society, many of whose members went on to become senior Freemasons. One of his former classmates said of him 'Henry Clay Folger was a shy, taciturn Phi Beta Kappa who lived by three rules: Never tell what you've done, what you are doing, or what you are going to do',⁵²⁴ the kind of welcome qualities characteristic of a secret and invisible member of Bacon's Rosicrucian-Freemasonry Brotherhood.

The founder of the Folger Shakespeare Library knew Bacon's writings intimately and no doubt poured over his essay *Of Simulation and Dissimulation* to the point that he knew off by heart what could be taken as a Rosicrucian-Freemasonic manifesto by which Henry Clay Folger lived his whole life:

For if a man have that penetration of judgement as he can discern what things are to be laid open, and what to be secreted, and what to be shewed at half lights and to whom and when,...

..There be three degrees of this hiding and veiling of a man's self.

For the first of these, Secrecy; ...mysteries are due to secrecy....Therefore set it down, *that an habit of secrecy is both politic and moral*.

For the second, which is Dissimulation; it followeth many times upon secrecy by a necessity; so he that will be secret must be a dissembler in some degree...

But for the third degree, which is Simulation and false profession; that I hold more culpable, and less politic; except it be in great and rare matters.⁵²⁵

In 1928 Folger resigned as chairman of Standard Oil of New York when he retired to devote all of his energies for his plans and the development of the Folger Shakespeare Library. For an architect Folger contacted an old acquaintance Alexander Trowbridge during the summer of 1928 who he hired as a consulting architect. For a primary

architect Trowbridge recommended to Folger the French-born Philadelphia architect Paul Philippe Cret. In France Cret was educated at the Beaux Arts School in Paris at the atelier of the renowned and celebrated French architect Jean-Louis Pascal. Cret arrived in the United States in 1903 and was appointed as professor of design at the University of Pennsylvania. His first major commission designed with Albert Kelsey was the Pan American Union Building the headquarters for Organization of American States erected on Constitution Avenue in Washington, DC. Its cornerstone was laid on 11 May 1908 by President and leading Freemason Theodore Roosevelt. He had been present at the memorial service held by the Grand Lodge of Pennsylvania in 1906 in honour of Folger's illustrious ancestor Benjamin Franklin and that month delivered the address at the laying of the Masonic cornerstone of the House of Representatives Office building in Washington, DC.⁵²⁶ The El Paso Scottish Rite Temple designed by Hubbell and Green of Dallas, Texas 'is an almost literal transcription' of Cret's Pan American Union Building.⁵²⁷ Situated close to the Folger Shakespeare Library on 1733 Sixteenth Street is The Supreme Council (Mother Council of the World) of the Thirty-Third Degree of the Ancient and Accepted Scottish Rite of Freemasonry. The emblem of the Supreme Mother Council of the World is a double headed eagle above which rests a crown with at its peak a triangle residing within it is the number 33 simple cipher for Bacon. The Folgers worked hand in glove with the architects every step of the way down to the absolute minute details of every single aspect of its design and build:

The library would become two different buildings, one concealed within the other. The architect's vision would rule the exterior design, but the Folgers' Shakespearian taste would dominate the interior. On the outside, Cret's design would harmonize with its surroundings: the Capitol, the Library of Congress, the Russell Senate Office Building, and the soon-to-be-built Supreme Court Building...The Folger Library would be an institution with two personalities. To passersby, the exterior would suggest the federal buildings of twentieth-century Washington. To those who ventured inside, the interior would, in an instant, transport visitors back more than three hundred years to Elizabethan or Jacobean England. Like a play within a play, the architecture of the Folger Library contained secrets.

...Henry and Emily wanted the library's interior to mesmerize visitors with words, signs, and symbols. Emily wrote that they intended the library to represent "the First Folio, illustrated." Thus, Henry would call for stained-glass windows, crests, floor tiles, quotations cut in stone, and symbols-including the ubiquitous Tudor Rose-carved in wood. He chose every design element to communicate a specific meaning-many of them sophisticated and obscure. The symbols, images, and sayings formed a silent composition that only he and Emily could hear. In balance, they created a harmonic resonance that conjured up the spirit of Shakespeare's England. Folger exercised great care in choosing them, specifying their exact spelling and punctuation, preserving archaic forms. In the realm of these secret words and signs, only a time traveler or a scholar could comprehend and decode them.⁵²⁸

For the main north façade the Folgers selected quotations from Ben Jonson, Samuel Johnson, and the supposed editors of the Shakespeare First Folio John Heminge and Henry Condell. For nine white marble bas-reliefs depicting scenes from *Henry IV*, *Hamlet*, *Macbeth*, *King Lear*, *Julius Caesar*, *The Merchant of Venice*, *Richard III*, *Romeo and Juliet* and *A Midsummer Night's Dream* selected by the Folgers, Cret suggested New York sculptor John Gregory, to which the Folgers agreed.⁵²⁹ For a planned garden of the west side of the library they requested that a marble statue be 'embowered in shrubbery', overlook a fountain, and portray Puck gesturing with the caption with its simply immortal line 'Lord, What Fools These Mortals Be', a coded message to the Shakespeare academics and ordinary schoolmen who have never yet



Fig. 52 Folger Shakespeare Library at 201 E Capitol Street, SE in Washington, D.C

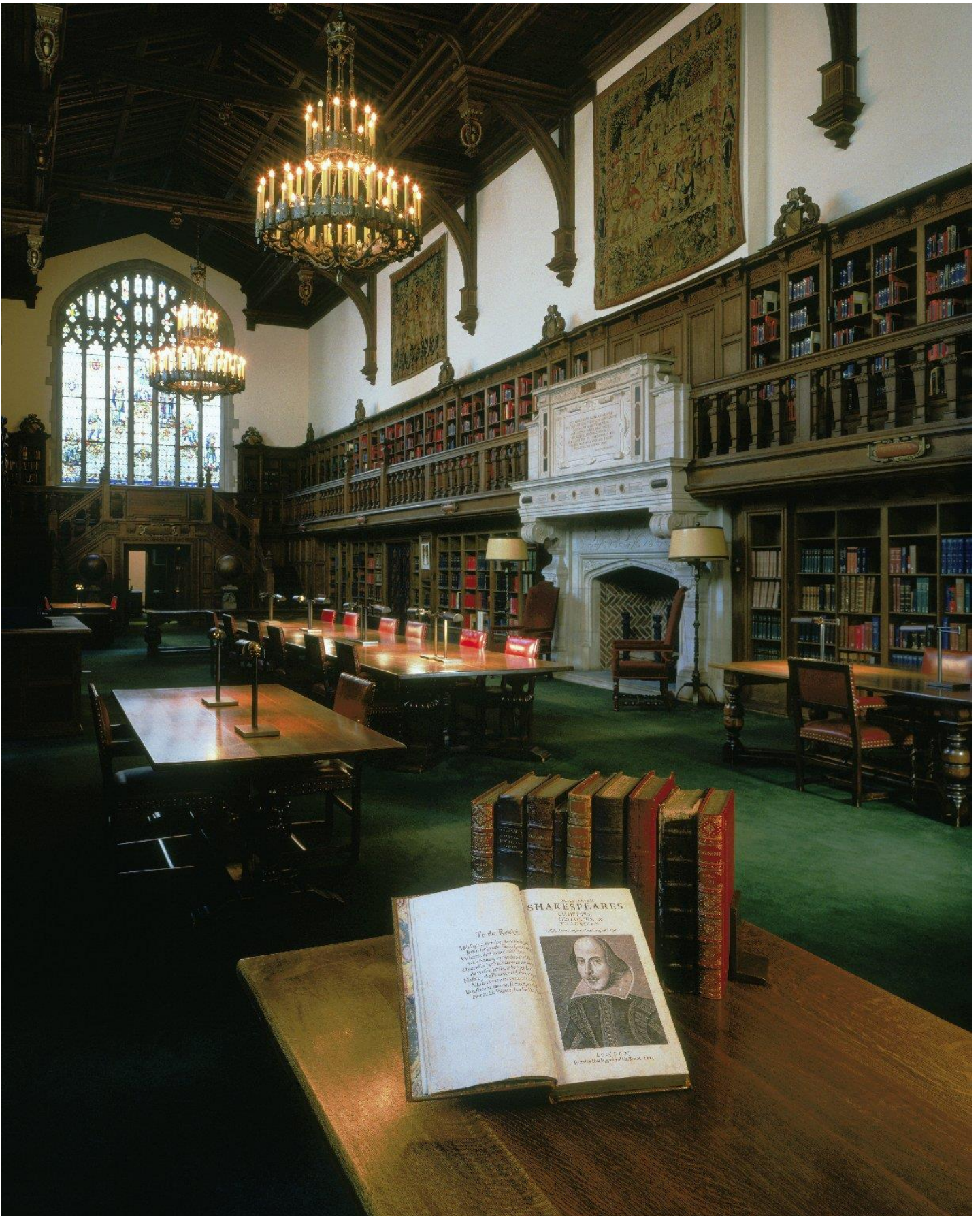


Fig. 53 The Gail Kern Paster Reading Room at the Folger Shakespeare Library,
Folger Shakespeare Library Digital Image Collection

had the required wit to decipher it. For its design and execution Trowbridge suggested the sculptor Brenda Putman, daughter of Henry Putnam, Librarian of Congress, who had been instrumental in facilitating the very existence of the Folger Shakespeare Library. Both Grant and Mays point out that the ‘angle of Puck’s gaze’ is ‘toward the Library of Congress’,⁵³⁰ founded or re-founded on Thomas Jefferson’s personal library based on Lord Bacon’s organization of knowledge-Memory, Reason and Imagination followed by the Library of Congress until just before the dawn of the twentieth century. The angle of Puck with its associated immortal caption ‘Lord, What Fools These Mortals Be’, situated in the west garden of the Folger Shakespeare Library gazing towards the Bacon inspired collection of the Library of Congress, sends a cryptic message to the deceived and deluded fools who believe the illiterate Shakspeare of Stratford was the author of the greatest literature known to humankind: *Bacon is Shakespeare*.

As part of the secret complex cryptogram carefully designed by the Folgers which in many respects forms the key occult theme of the Folger Shakespeare Library with its arcane symbols, images and allegories, shrouded in mystery, the very language of Lord Bacon’s Rosicrucian-Freemasonry Brotherhood described in its own rituals as ‘a profound system of morality, veiled in allegories and illustrated symbols’, is a large stained-glass window set in the west wall of the reading room. To the specifications of the Folgers it was created by the Italian-born American stained glass designer Nicola D’Ascenzo who created the window for the Washington Memorial Chapel in Pennsylvania dedicated to the President and Freemason George Washington and the Washington National Cathedral whose foundation stone was laid in the presence of President and Freemason Theodore Roosevelt. This magnificent 400 sq. ft. window ‘the library’s single grandest decorative element’, writes Mays, is ‘visible only from inside, and its theme was of vital importance to Henry’.⁵³¹ It depicts the passage from Jacques’s (who has been identified with Bacon) ‘Seven Ages of Man’ speech from *As You Like It* which begins with the heavily pregnant and immortal lines conveying that universal truth:

All the world’s a stage,
And all the men and women merely players.
[*As You like It*: 2:7:139-40]

In the centre of the east wall the Folgers had a replica of the Shakespeare Memorial Bust overlooking the grave of William Shakspeare mounted in the Holy Trinity Church at Stratford-upon-Avon which gazes across the room to the stained-glass window of the ‘Seven Ages of Man’. To the present day no one knows just who was responsible for placing the Stratford Bust at Stratford sometime before 1623 a *terminus ante quem* determined by the publication of the Shakespeare First Folio. Well this is what is said in orthodox accounts of William Shakspeare. But both Henry and Emily Folger avid readers of Baconian literature would have known Baconian scholars and cryptologists have for a long time presented evidence or reasons indicating that it was placed there by Bacon and his Rosicrucian-Freemasonry Brotherhood. Few knew any better than Henry Folger that all the world’s stage and the men and women merely players. He himself had lived a double life, served as a front, and had a shadowy duality, and was part of a secret society. All his life Folger had played one role in private and another role in public. On the Shakespeare stage extending to the four corners of the world he and his wife Emily Folger played their parts exceedingly well. A grand performance that Bacon, Founder of the Rosicrucian-Freemasonry Brotherhood, would surely have

been impressed with. The arcane message of placing a replica of the Shakespeare Memorial Bust looking out at the magnificent stained-glass window depicting the 'All the world's a stage,/And all the men and women merely players' scene from *As You Like It* is that Shakspeare of Stratford was playing a role and was merely a literary front for the true author of the Shakespeare poems and plays, Lord Bacon.

The ubiquitous Tudor Rose conceals another part of the profound secret of the silent composition in the arcane cryptogram of the Folger Shakespeare Library. The word Rosicrucian is derived from 'Rose Cross' and Christian Rosencreutz of *The Chemical Wedding* adorns a red cross and roses as symbols of the Rosicrucian Brotherhood. The secret invisible Order is frequently referred to as the Brotherhood of the Rosy Cross and the title page of several Rosicrucian publications depict the symbol of the Rose.

The rose has an ancient history as a symbol of secrecy and the phrase *sub rosa* means to communicate or done in secret. If we look at the monument of Francis Bacon at St Michael's Church, Gorhambury we see that his feet are sporting a matching pair of Rosicrucian Roses befitting of the Founder of the Brotherhood of the Rosy Cross and the ubiquitous Rosicrucian Rose in the Folger Shakespeare Library denotes that it is a Rosicrucian Temple devoted to Francis Bacon, Grand Master of the Rosicrucians and secret concealed author of the Shakespeare works.

After the cornerstone of this Rosicrucian Temple of Baconian learning had been laid in May 1930 Henry Clay Folger entered St John's Hospital in Brooklyn for what was believed to be a routine operation for an enlarged prostate. While confined to his bed recuperating and recovering Folger in characteristic fashion was still conveying orders and directives concerning the construction and design of the library. But things took a turn for the worse and three weeks after the first operation his medical team informed him that he required a second operation which proved unsuccessful. On 11 June 1930 the great collector of Shakespeareana Henry Clay Folger unfortunately died without deservedly seeing his lifetime project completed. His funeral took place two days later on 13 June in the Chapel of the Central Congregational Church on Hancock Street, where Henry had been a worshipper, trustee and donor, near Franklin Avenue, named after his ancestor Benjamin Franklin, the leading Freemason of his time. The great statesman would doubtless have been proud of him for the Baconian-Shakespearean shrine he left to the American people.

The funeral service and eulogy was delivered by its pastor and Henry Folger's close friend Reverend Samuel Parkes Cadman. The English-born Reverend Cadman was a great liberal Protestant clergyman, newspaper writer, author of numerous books and pioneer Christian radio broadcaster of the 1920s and 1930s and from 1924 to 1928 the President of the Federal Council of the Churches of Christ in America. His true impact upon his times and humanity was enormous 'It has been said that in his generation no man exerted more influence for the brotherhood of man.'⁵³² He was also a member of the Independent Royal Arch Lodge No. 2 New York City and Grand chaplain of the Grand Lodge of New York for twenty-eight years.⁵³³ In his eulogy the Rev. Cadman said that 'Mr. Folger was a singular mild man: he kept a steady silence which was more eloquent than speech. I do not recall a single instance when an unkind word left his lips. His life was marked by self-discipline and poise.'⁵³⁴ His grieving lifetime companion Emily did not bury him. His remains were cremated and in keeping with his wishes his ashes now lie in a mortuary urn in the wood panelled Reading Room in the Folger Shakespeare Library beneath the replica of the Stratford Shakespeare Monument installed by Lord Bacon and his Rosicrucian-Freemasonry Brotherhood. The urn of Henry Clay Folger is concealed behind a bronze tablet on which is engraved 'To the Glory of William Shakespeare and the Greater Glory of



Fig. 54 The monument of Francis Bacon at St Michael's Church, Gorhambury adorned with Rosicrucian Roses

God' comprising 53 letters, an occult number in Baconian-Rosicrucian-Freemasonic circles denoting the letters SOW in simple cipher, standing for SONS OF WISDOM, or members of Bacon's Rosicrucian-Freemasonry Brotherhood.

In his will Folger named his wife as executor and bequeathed \$10,000,000 to the Trustees of Amherst College as an endowment for maintaining and developing the Folger Shakespeare Library. The will was drawn up two years before the 1929 stock market crash and its reduced value proved insufficient as an endowment with which to operate the library. To ensure that her husband's ambition and dream to establish the greatest Shakespeare Library in the world was realised Emily Folger generously donated a large sum of money from her own private funds to complete its construction and cover its ongoing costs. In October 1930 Emily transferred the deed to the library to the trustees of Amherst. The trustees created a Folger committee of board members chaired by Dwight Morrow, US Ambassador to Mexico (1927-30). When Morrow died in 1931 his Amherst classmate and former US president Calvin Coolidge became chairman, whose wife Grace Coolidge was a member of the Order of Eastern Star,⁵³⁵ a Freemasonic appendant body accessible to both men and women, with men having to be Master Masons, and the women, the daughter, wife or mother, of a Master Mason.

The library finally officially opened on 23 April 1932 supposedly the 368th birthday of William Shakspeare and the date (23 April) that he is said to have died in 1616. It is of course well-known that 23 April is St George's Day, though it is less well known that the patron saint invariably portrayed with a red cross very similar to the red cross of the Rosicrucian Brotherhood is the saint after whom early Freemasons named their Lodges.

The special opening ceremony attracted a list of distinguished guests from around the world among them ambassadors from Great Britain, Germany and France; various members of Congress, Justices of the US Supreme Court and dignitaries from US colleges and universities. With good reason the British Ambassador to the United States Sir Ronald Lindsay (Knight Grand Cross of the Order of St Michael and St George) was invited to participate in the opening of the Rosicrucian Temple or Shrine to Bacon-Shakespeare. He was the fifth son of James Lindsay, 26th Earl of Crawford whose ancestor David Lindsay, first Lord Lindsay of Balcarres (1587-1642), was a contemporary of Bacon and owner of the earliest known English manuscript version of the two Rosicrucian manifestos the *Fama Fraternitatis* and *Confessio Fraternitatis* first published anonymously at Cassel in Germany in 1614 and 1615. This manuscript containing the *Fama* and *Confessio* dates at least as early as 1633 and may be even earlier. It shares many similarities with the Thomas Vaughan text, the English version of the *Fame* and *Confession* that first saw print in 1652, which cryptically revealed Bacon's authorship on its title page. Both the Lindsay and Vaughan texts most likely independently derive from a common ancestor via a copy of the original manuscript of the Rosicrucian manifestos,⁵³⁶ directly or indirectly from their anonymous author, Lord Bacon.

The British Ambassador to the United States delivered the congratulations of King George V (Royal Grand Patron of three Freemasonic charities of the Grand Lodge of England),⁵³⁷ now sitting on the throne previously occupied by Bacon's royal mother Queen Elizabeth. On the arrival of President Hoover and his wife the large crowds about and around the Folger Shakespeare Library excitedly waved and cheered. The president and his wife were seated directly to the left of Emily Folger as they all took their places on the stage of the Elizabethan Theatre in the Folger Shakespeare Library. With her deceased husband Emily also knew that the Folger Shakespeare Library and the world are stages, and men and women merely players, playing their public roles.

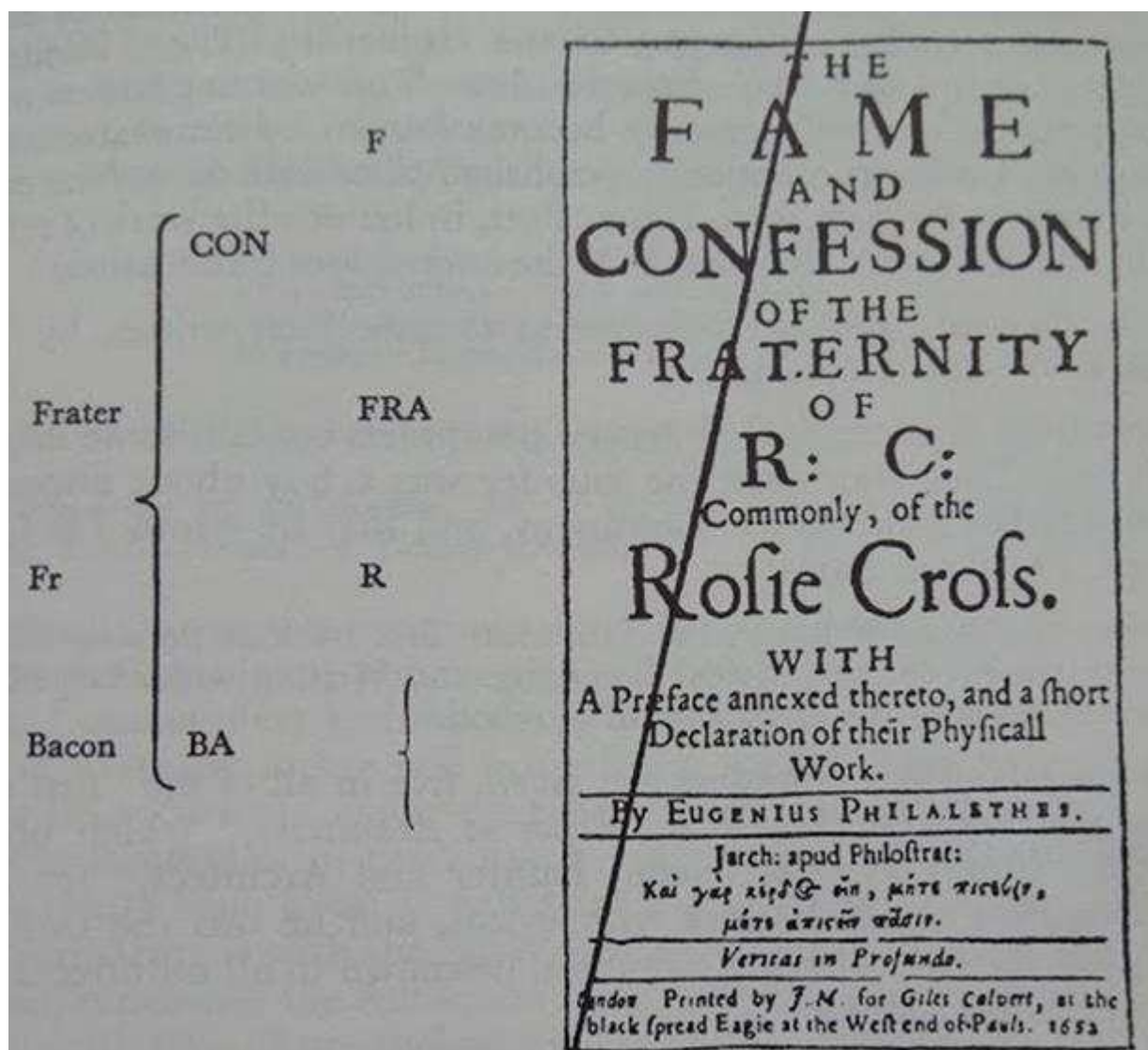


Fig. 55 The deciphered title page of *The Fame and Confession of the Fraternity of R: C: Commonly, of the Rosie Cross*

The Reverend Dr S. Parkes Cadman, a member of the Independent Royal Arch No. 2, New York and Grand Chaplain of the Grand Lodge of New York, read the invocation and benediction 'As the pastor of Mr. and Mrs. Folger for the past thirty years, I can testify to the energy, concentration, and devotion which they so boundlessly exhibited in behalf of this enterprise. It was a dream of their lives and to it they gave all they were, and much of what they had.'⁵³⁸ The Folger Shakespeare Library's Director of Research Dr Joseph Quincy Adams delivered the first 'Shakespeare Birthday Lecture' entitled 'Shakespeare and American Culture' in which he placed the importance of the Folger Shakespeare Library on a par with the Lincoln Memorial and the Washington Monument:

In its capital city a nation is accustomed to rear monuments to those persons who most have contributed to its well-being. Amid... Washington D.C., three stand out conspicuous above the rest: the memorials to Washington, Lincoln and Shakespeare. They stand out as symbols of the three great personal forces that have moulded the political, the spiritual and the intellectual life of our nation.⁵³⁹

In locating the Folger Shakespeare Library near Capitol Hill, the White House and the magnificent Freemasonic Temple of The Supreme Council 33^o of the Ancient and Accepted Scottish Rite of Freemasonry, the incomparable philosopher-poet Bacon-Shakespeare, Founding Father of the United States of America and his Rosicrucian-Freemasonic Brotherhood will forever secretly watch over its capital Washington DC, the most powerful capital in all the English speaking world.

In 1932 Emily Folger received an honorary doctorate from Amherst College for her tireless work alongside her husband Henry Clay Folger in their quest to construct the greatest Shakespeare library in the world. She made regular trips to Washington and enjoyed serving afternoon tea for her guests until ill-health began to get the better of her. After suffering some time from heart issues on 21 February 1936 aged seventy-seven Emily Folger died at her estate in Glen Cove, Long Island. As with her husband Emily's funeral eulogy was delivered by Reverend S. Parkes Cadman at Brooklyn's Central Congregational Church.⁵⁴⁰ To their beloved Folger Shakespeare Library she bequeathed the bulk of her estate to be administered alongside the remainder of that of her husband as an endowment to secure its future. The mortuary urn containing her ashes was also joined with the urn of her husband in the Folger Shakespeare Library Reading Room beneath a replica of the Shakespeare bust in Stratford-upon-Avon the original of which was placed there by Lord Bacon and his Rosicrucian-Freemasonic Brotherhood about the time of the publication of the Shakespeare First Folio the book on which their Rosicrucian-Freemasonic monument to Bacon-Shakespeare is built.

The Folgers earlier earmarked William Adams Slade, the chief bibliographer at the Library of Congress as the first Director of the Folger Shakespeare Library based on the recommendation of Herbert Putnam, the Librarian of Congress, in 1932.⁵⁴¹ He was viewed as a chief of operations and the Folgers also hired the prominent Shakespeare scholar Joseph Quincy Adams from the English Department at Cornell University as a supervisor of research to oversee academic and scholarly interests.⁵⁴² Two years later Slade returned to the Library of Congress in November 1934 and the Amherst trustees named Joseph Quincy Adams acting library director and afterwards when the position was confirmed he occupied the position for more than a decade from 1934-46. The Folger Shakespeare Library also hired the Shakespeare scholar Giles E. Dawson who had earned his PhD under Adams at Cornell as a reference librarian and afterwards as the curator of books and manuscripts from 1946 until his retirement in 1967.⁵⁴³ It also

appointed Professor James G. McManaway of John Hopkins University, an editor and author of several works on Shakespeare, who during his long tenure there served for a period as an acting director of the Folger Shakespeare Library.⁵⁴⁴

In its early decades the Folger Shakespeare Library poured large resources into the authorship controversy and some of its senior officials and distinguished academics together with numerous professors and scholars sponsored through its fellowship programmes wrote a number of articles, pamphlets, and books on the subject. In 1950 the BBC broadcast a talk given by Dr Giles E. Dawson, curator of rare books and manuscripts at the Folger Shakespeare Library entitled 'Who Wrote Shakespeare'. It immediately came to the attention of the Francis Bacon Society and in the editorial of the autumn 1950 edition of its organ the *Baconiana* it condemned the broadcast 'as superficial, prejudiced, and consequently so misleading that it was decided by the Council of the Francis Bacon Society to make an application to the B.B.C. for a date in which to present the other side of the case. We had further justification in that the speaker accused the Baconians of "erecting a complex fabric of mystery, secrecy, and intrigue."'⁵⁴⁵ The editor accordingly submitted a request to the BBC for a date that was refused who subsequently accused the BBC of hypocrisy in not giving them the chance to respond to the Stratfordians narrative that 'they fictionise and fabricate'.⁵⁴⁶ In an exchange of letters between the Bacon Society and the BBC the former accused the latter of pretending to be independent and impartial. It concluded the directors of the BBC 'have acted in a prejudiced and one-sided manner, and have lent what is a national institution, to mislead the public and uphold ignorance and falsehood.'⁵⁴⁷ Two learned contributors to the *Baconiana* proceeded to expose, dismantle and thoroughly demolish, the open false narrative articulated by Dr Dawson.⁵⁴⁸

On 10 August 1950 the article by Dr Dawson 'Who Wrote Shakespeare' appeared in *The Listener* providing an outline Folger Library script which was enlarged upon in the following decades. It begins in predictable fashion:

It was just over a hundred years ago that the first serious claim to the authorship of Shakespeare was made on behalf of Francis Bacon.

..The foundations of the notion that Shakespeare could not have been the author of the plays were laid during the closing decades of the eighteenth century and the early years of the nineteenth.

...When an author's name appears on the title-page of a literary work, when he can be shown to have been generally reputed in his day as the author, and when no contemporary counter-claim is known, literary historians accept such evidence as conclusive. Anyone who questions it must produce good reason for doing so, must account for the original error, and finally explain why the error was not challenged in the author's lifetime.

....Jesuits from the Continent, whose lives depended upon secrecy, were discovered and hanged. The Gunpowder Plot leaked out and was forestalled. But of this great dramatic intrigue, in which many men must have shared, no whisper was heard until more than two centuries later.⁵⁴⁹

The series of statements that the foundations of the Shakespeare authorship were laid during the closing decades of the eighteenth century and no contemporary whisper was heard that William Shakspeare of Stratford was not the author of the Shakespeare works is completely and utterly false. The poet and dramatist John Marston and the satirist and moralist Joseph Hall emphatically revealed that Bacon was the author of *Venus and Adonis* and *The Rape of Lucrece* in a series of satires published between 1597 and 1599, as first revealed by Walter Begley as far back as 1903, and repeatedly reiterated by numerous other scholars ever since.⁵⁵⁰ Just one of several contemporary

whispering and indicative examples that can readily be bought forward to give lie to the illusion the illiterate/semi-illiterate Shakspere of Stratford was Shakespeare, rather than the fact he was a literary front for Lord Bacon.

In drawing the article to a close Dr Giles Dawson of the Folger Shakespeare Library finishes off with a great double bluff that hopefully one day,

there will be no further call for ingenious men to spend harmless lives finding cryptograms where there are none...⁵⁵¹

While we are here let us see if we can discover a cryptogram where none according to Dr Dawson, curator of the Folger Shakespeare Library, exists. The title and author attribution asks the question 'Who Wrote Shakespeare? By Giles E. Dawson' contains 33 letters Bacon in simple cipher revealing the answer Bacon is Shakespeare. The first four lines of the article are framed by a very large capital I. These four lines contain 203 letters Francis Bacon(100)/Shakespeare (103) in simple cipher which translates as Francis Bacon is Shakespeare. The cartoon in the middle of the page by satirist Max Beerbohm depicting Lord Bacon giving the actor William Shakspere one of his plays with the caption 'William Shakespeare, his method of work' contains 33 letters Bacon in simple cipher. With the complete line 'William Shakespeare, his method of work': cartoon by Max Beerbohm' containing a total of 53 letters, as we have seen, an occult number in Baconian-Rosicrucian-Freemasonic circles denoting the letters SOW in simple cipher, for Sons of Wisdom, members of Bacon's Rosicrucian-Freemasonry Brotherhood. The carefully formatted text itself is printed in 66 lines: a double cipher for Bacon (33)/Bacon (33).

On 1 July 1948 the Folger Shakespeare Library appointed as its new director Louis B. Wright who served in the position for the next twenty years. During his tenure the Folger Elizabethan Theatre was first used to stage a first full-length performance of a Shakespeare play. On 3 April 1949 the Amherst Masquers performed *Julius Caesar* in a telecast funded by NBC broadcast to fourteen cities in the US. During the play's intermission the president of Amherst Charles W. Cole and Louis B. Wright provided some commentary and analysis.⁵⁵² It did not include commentary on the pregnant line 'Never till Caesar's three and thirty wounds (5:1:53). Both the Greek and Roman historians Plutarch and Suetonius state that Julius Caesar was stabbed 23 times. Why then is it stated as 33 times in the play *Julius Caesar*? Because 33 is Bacon in simple cipher just was of the countless pointers Bacon leaves cryptically revealing for those with eyes to see his authorship of the Shakespeare plays.

Toward the end of the following decade Louis B. Wright turned his attention to the Shakespeare authorship controversy in the disparagingly titled 'The Anti-Shakespeare Industry and the Growth of Cults'. In his article its open plain text is characterised by withering sarcasm and contempt. The Shakespeare authorship question rather than a legitimate inquiry into the truth was instead an anti-Shakespeare business which had given rise to mystical cults from the time Delia Bacon published *The Philosophy of the Plays of Shakespeare Unfolded* advocating that Bacon was the concealed author of the poems and plays 'Today almost anybody with a typewriter and a willingness to abandon his mind to nonsense can find a publisher for a book asserting somebody else wrote Shakespeare.'⁵⁵³ Apparently, without even the slightest degree of irony and self-awareness Louis B. Wright, Director of the Folger Shakespeare Library gives full vent to a vituperative onslaught while accusing 'anti-Shakespeareans' of arrogance and bad

Who Wrote Shakespeare? 19

By GILES E. DAWSON

14
33

It was just over a hundred years ago that the first serious claim to the authorship of Shakespeare was made on behalf of Francis Bacon. Since that time many candidates for that honour have been proposed—the Earl of Derby, the Earl of Oxford, the Earl of Rutland, and Sir Edward Dyer, to name only the more prominent ones. And then there have been those who, while not attempting to identify the author, have been convinced that William Shakespeare of Stratford-on-Avon could not be the man. These widely divergent claims have produced scores of books and several periodicals, and there is yet no evidence of any ebb in the tide.

Yet the professors of English literature and other literary historians of standing have paid scant attention to these theories, seldom taking the trouble to refute them. Indeed one of the most constant complaints of the Shakespearean heretics and unbelievers is that academic scholars ignore them. And they seek to escape the natural implications of this treatment by the charge of 'vested interests' and fear of the truth. Andrew Lang's *Bacon, Shakespeare, and the Great Unknown*, the last of that prolific scholar's works, is the most substantial attack on the unbelievers, and, though never finished, still one of the best.

The foundations of the notion that Shakespeare could not have been the author of the plays were laid during the closing decades of the eighteenth century and the early years of the nineteenth. The Shakespeare idolatry of that period created an impossible Shakespeare, of almost divine wisdom and perfection, who in truth could not have sprung from lowly village folk, or from any level of society. The first error lay in the impossible concept of Shakespeare, and from it proceeded the second, the search for a man whose education, experience and station seemed better to fit the superman who had been created.

This attitude suggests two questions: What kind of an education did Shakespeare receive? How did this education fit him to write his great plays? As for the first, we know only that Stratford possessed an uncommonly good school, which was free for the sons of bourgeois—that is, for Will Shakespeare. No record exists of the actual curriculum of the Stratford school, but the curricula of such schools differed only in details, and a good many others are known. It is at least beyond dispute that any boy who spent the usual term of years in a good grammar school in the late sixteenth century would have acquired a reading knowledge of Latin and been on very familiar terms with such writers as Ovid, Virgil, and Cicero. The standard reply of the doubters to such statements as I have just made is that no records exist which prove that the young Shakespeare ever spent a day in the Stratford Grammar School. This is true. Nor can it be proved that he ever ate mutton for his dinner. It is simply a fact that records of the school in his time, if such ever existed, have not survived.

It cannot be proved that during those years any boy sat in one of its forms or construed a sentence there. But since the corporation continued to pay a schoolmaster we must assume that boys did attend the school. We may assume, too, that the days of Will Shakespeare's youth—about which there are, quite naturally, no records—were spent in the usual ways. If these assumptions are legitimate, then any contrary statement must be supported by positive evidence, not by citing the

absence of records. Ben Jonson's dictum on Shakespeare's 'small Latin and less Greek' does not constitute such positive evidence, for it can be interpreted only in the light of the speaker's own high standards of classical training and of the context in which he used the words, both of which make it clear that Jonson was not pronouncing his friend an unlettered boor.

What he says about Shakespeare is that he was not particularly learned and that he was careless about his facts and about observing the formal proprieties so much insisted upon by the classicists of the sixteenth century. On the other hand, he has warm praise for Shakespeare's genius. And his successors, like Dryden, Pope, and Samuel Johnson, agree with him. None of them finds Shakespeare learned; they all pronounce him to be careless; they are unanimous in praising his genius. Not until the romantic criticism took over did men become so fascinated with the poet's high qualities that they began ascribing to him not only genius and unsurpassed dramatic skill, which he did possess, but infinite learning and knowledge as well. Nowadays, with at least a partial return to critical sanity, competent scholars no longer believe in Shakespeare's infinite learning. The old idea, for example, that he exhibits a familiarity with the law which could only have come through professional training has been fully exploded by the researches of Paul Clarkson and Clyde Warren, who demonstrate not only that Shakespeare's knowledge of the law was vague and inaccurate but that several of his fellow playwrights employ legal language more frequently and better than he does.

No, Shakespeare's works display but little learning, and we need not seek, as their author, a university man, a lawyer, a courtier, a traveller. The author of those plays was a man of genius, a poet, and an artist. Such men, though they have not always in their early years impressed their prosaic elders as anything beyond the ordinary, are born, not made. It was not in a school or a

university that Shelley learnt to write the 'Ode to a Skylark'. Young men of that stamp experience life more sharply than ordinary men do, see it more clearly—wherever they see it, though it be mainly in books—and are able, sometimes, to capture it on paper, on canvas, or in stone. Such was Shakespeare, and he was also—perhaps above all—a practical man of the theatre, one who knew how to make effective plays for audiences at the Globe or at Hampton Court. If he lived but little among noblemen and courtiers, he knew them well in chronicle and romance, and what he read fired his imagination.

However silent the records may be about Shakespeare's education, there are at any rate records enough to keep the doubters from denying the existence of such a man both in Stratford and in London. It would be easier for them if they had only to deal with a Thomas Dekker or a John Webster, whose biographies consist of little more than lists of their printed works. In comparison with these and with most of his fellow dramatists we know a great deal about Shakespeare. We have, for example, nearly a hundred printed allusions to him, made during his lifetime by more than forty different writers. One of the best known of these, in Francis Meres' *Palladis Tamia*, 1598, forms an important link in the Oxfordian chain of evidence. 'The best for comedy among us', Meres writes, 'be Edward Earl of Oxford, Doctor



'William Shakespeare, his method of work': cartoon by Max Beerbohm

Fig. 56 The deciphered first page of 'Who Wrote Shakespeare' by Giles E. Dawson, Curator of the Folger Shakespeare Library

manners in adopting the well-worn Stratfordian strategy of accusing their detractors of what they are themselves most culpable:

These cults have all the fervour of religion, and indeed, the whole movement is permeated with emotion that sweeps aside the intellectual appraisal of facts, chronology, and the laws of evidence. The disciples of cults, like certain other fanatic sectarians, rail on disbelievers and condemn other occultists as fools and knaves. One of the curious phenomena of the cults is the bad manners and arrogance displayed at times by their members.⁵⁵⁴

Evidently Wright had a particular fondness for the word truth but like all Stratfordians his relationship with that noble immutable concept is rather complex and elusive and everyone else is just a deluded conspiracist:

The anti-Shakespeareans talk darkly about a conspiracy of orthodox college professors to maintain the authenticity of “that yokel” or the “butcher boy of Stratford.” The refusal of scholars to waste time over the controversy, they reason, is part of a plot to keep enthroned an impostor named William Shakespeare of Stratford....

Scarcely a week goes by that some devoted soul does not write to the Folger Shakespeare Library protesting its alleged orthodox advocacy of William Shakespeare’s authorship. Here is an institution, they imply, that is part of the dark “conspiracy” to suppress the truth!...The Folger Shakespeare Library has not the slightest interest in maintaining the authorship of William Shakespeare of Stratford or any other candidate.⁵⁵⁵

He then makes a statement that all right thinking individuals would whole-heartedly agree with ‘the important thing to be remembered is that truth does matter’,⁵⁵⁶ before proceeding to unleash a piece of simply breath-taking mendacity on a colossal scale:

For all the dust stirred up by the anti-Shakespeareans, they have not adduced a single shred of objective evidence to prove that William Shakespeare of Stratford did not write the plays in the accepted canon or that anyone else is the author. Their so-called “case” rests on conjecture, surmise, and self-induced hypothesis.⁵⁵⁷

While all the doubters and disbelievers were suffering from self-induced hypothesis it appears Louis B. Wright, Director of the Folger Shakespeare Library, was suffering from self-induced amnesia. It may have mentioned Bacon’s collection of manuscripts known as The Northumberland Manuscript originally containing his two Shakespeare plays *Richard II* and *Richard III* wherein scribbled all over its outer-cover is the name of Francis Bacon and his pseudonym Shakespeare. Of especial interest is the line written above the entry for *Richard II* ‘By Mr. ffrancis William Shakespeare’ and further down the page the word ‘your’ is written twice ‘William Shakespeare’, so it reads ‘Your William Shakespeare’.⁵⁵⁸ Or our Louis B. Wright, Director of the Folger Shakespeare Library, might in the interest of scholarly integrity have cared to draw to the attention of his learned readers Bacon’s *Promus of Formularies and Elegances* (his private manuscript notebook held at the British Library: Harleian 7017) in which several hundred of its entries resemble, correspond and parallel words, phrases and the language of the Shakespeare plays, throughout the whole canon.⁵⁵⁹ Or the man and the scholar, to whom the truth matters, could if he had wished have highlighted the *Memoriae* published by Bacon’s private secretary and Rosicrucian Brother Dr Rawley following his supposed death in 1626, wherein several of the verses pointed to the fact that Bacon was the concealed poet and dramatist Shakespeare.⁵⁶⁰ Added to the various contemporary manuscripts and documents, and overwhelming textual evidence (there are more than a thousand known resemblances, correspondence and parallels between

Bacon's acknowledged writings and his Shakespeare poems and plays) there is also the cryptographic evidence in all its various forms: ciphers, codes, acrostics, anagrams and cryptograms, Baconian-Rosicrucian headpieces and tail-pictures, as well as secret emblems, symbols and other images, revealing and confirming Bacon is Shakespeare.

The truth as Wright insists does matter, but what truth, the public or literal truth, the secret truth known by those in private belonging to invisible secret societies, to whom public individuals have behind closed doors sworn oaths of secrecy. A higher truth that takes precedent over a public truth, thus adhering to a secret truth in private does not negate this higher truth by making false statements in public. Or a truth that is a combination of literal falsehood combined simultaneously with a concealed truth, a Baconian method of delivery where the secret truth is not impugned because it is there for us all to decipher, read, and interpret.

When we turn to the end of the article by Louis B. Wright, Director of the Folger Shakespeare Library, we discover the glorious truth, the Baconian-Rosicrucian truth, concealed and revealed before our very eyes:

Those who read Shakespeare's plays for hidden meanings and secret cryptograms find an outlet for their energies which they believe rewarding. Although two of the greatest living cryptographers, Colonel William Friedman and Elizebeth Friedman, in "The Shakespearean Ciphers Examined," have shown with extraordinary patience and objectivity that not one of the cryptographic "discoveries" concerning Shakespeare has a shadow of validity, these dedicated believers will never be convinced. They work in a realm of faith not of fact.⁵⁶¹

The above paragraph begins on the penultimate page 302, if the numbers are reversed the number 203 it yields a simple cipher of 100/103 Francis Bacon (100)/Shakespeare (103). The second page (the last page of the article) is numbered 303, if the null '0' is dropped it leaves 33 Bacon in simple cipher. Across the top of the last page runs the header 'THE ANTI-SHAKESPEARE INDUSTRY 303' The header contains a total of 26 letters: 303-26=277: Francis Bacon (100)/William Shakespeare (177) in simple cipher, thus conveying the concealed truth that Francis Bacon is Shakespeare.

Three years later his distinguished colleague Dr James G. McManaway set forth *The Authorship of Shakespeare* published for The Folger Shakespeare Library in 1962. It has enjoyed the distinction of being continually reprinted (a fifth reprinting by 1979) and widely circulated among professors, the ordinary schoolmen, and their students. On the face of it, the open plain text of this official publication clearly had in mind a combined address: on the one hand to the doubters and unbelievers to alleviate or allay their concerns about the authorship of the Shakespeare works and on the other to provide a reassuring sermon for a comatose Stratfordian flock. Its third objective was to establish and entrench in the minds of future readers the basic tenets of the faith. Inevitably, it displayed the same kind of disregard for historical integrity and accuracy evinced by his Folger colleagues and predecessors.

He begins with a biographical resume intermixed with early notices of 'Shakespeare' all written with the familiar Stratfordian blend of distorting and conflating fact and fiction in a nice pleasant well-written narrative to smooth its easy acceptance into the minds of its unwitting victims. It is pitifully easy to persuade the unknowledgeable and uncritical with inaccurate, misleading and false arguments. For example, what is known he informs his readers of Shakespeare's education (i.e. Shakspeare of Stratford) comes largely from the plays and the poems themselves.⁵⁶² He had clearly forgotten the succinctly devastating words of his great fellow American, the poet, philosopher and man of letters, Ralph Waldo Emerson, who was not able to marry the man to the

cryptographers, Colonel William Friedman and Elizebeth Friedman, in "The Shakespearean Ciphers Examined," have shown with extraordinary patience and objectivity that not one of the cryptographic "discoveries" concerning Shakespeare has a shadow of validity, these dedicated believers will never be convinced. They work in a realm of faith not of fact.

The multitude of books disputing the authorship of Shakespeare's plays must provoke our thoughtful contemplation. They all represent a triumph of inspiration and industry over conventional scholarship and dull logic. They throw a great deal of light on the ways of erring men to literature. As for concrete proof, they are pretty much on a par. They are all convincing to their authors and to the cults that gather around them. They all contain much of wonder and mystery. They probably serve a good purpose. If these writers were not proving that somebody else wrote the plays, they might be swamping the presses with books about Shakespeare. There are already too many books and too many articles about Shakespeare—at least twice too many. God in his mercy has sent the anti-Shakespeareans to drain off some of this potential writing into other and more distant bibliographies.

How does one acquire the skill to write anti-Shakespearean books? First one must develop the habit of willing suspension of disbelief. Then one must break the hampering bondage to accepted facts and recorded knowledge. After that the way is clear. All one then needs is the capacity to climb into a soap bubble and soar away into Cuckoo-Land.

Fig. 57. The deciphered page of 'The Anti-Shakespeare Industry' by Louis B. Wright, Director of the Shakespeare Library

verse; not least because there is nothing in the sublime, incomparable and omniscient plays and poems which marries to the known life of William Shakspeare of Stratford.

There is no record or evidence whatsoever that William Shaskpere ever attended the local Stratford Grammar school 'but' insists Dr McManaway 'it is incredible' that he 'was not one of the pupils'.⁵⁶³ It apparently never troubled the one time acting Director of the Folger Shakespeare Library that his parents were demonstrably illiterate which many also believed to be the case with Shakspeare of Stratford, a simply life degrading affliction that affected his own children, which requires the sane among us to believe that the children of the supposed world's greatest writer, were functionally illiterate. Nor is there any record, evidence, or even suggestion, that Shakspeare of Stratford ever attended any of the two universities Oxford or Cambridge, not that to be a great writer one need to have gone to university, but it is clear that the author of the plays attended the latter. Or that Shakspeare attended one of the third universities at the Inns of Court even though it is again clear that the author of the Shakespeare plays was a member of Gray's Inn and a world-class lawyer as the plays display an intimate familiarity with the principles and practices of all the major branches of law: common law, civil law, statute law, and the maxims of English law, and its complex technicalities, customs and jurisprudence.⁵⁶⁴

The acting Director of the Folger Shakespeare Library Dr McManaway also wished to reassure his targeted readers that the reason there is no reference to the Shakespeare manuscripts in the will of Shakspeare of Stratford was 'for the obvious reason he no longer possessed them. As written, each had been sold to the actors.'⁵⁶⁵ Now whether or not the manuscripts of the Shakespeare plays were sold to actors no evidence exists that the original manuscripts were sold to actors rather say than copies of them. Yet undeterred with the inconvenience of facts and evidence where vacuous assertion will more than do Dr McManaway ploughed on regardless. After the plays were printed he confidently tells us 'When the printer finished his job, the manuscripts were regarded as worthless', before resolutely insisting 'the same thing happened after Jaggard had finished printing the Folio of 1623; the printer's copy was thrown away.'⁵⁶⁶ He does not divulge to the rest of us how he knows these things. Aside from the unlikelihood that Dr McManaway was some kind of time-traveller and was able to travel back to 1623 to the Jaggard printing shop and personally witness one of the Jaggards or one of their employees throwing the 36 manuscripts of the Shakespeare plays in the bin, he obviously had absolutely no knowledge whatsoever about what happened to them. To bolster his position Dr McManaway states:

The Elizabethan indifference to playwrights extended to their manuscripts. Manuscript plays had value only for actors, who might want to perform them, or publishers, who might want to have them printed. There were no Elizabethan collectors of literary autographs. When Francis Bacon arranged with Humfrey Hooper to publish his *Essays* in 1597, Hooper delivered the manuscript to John Windet the printer, and when the job was finished, this manuscript was discarded. No one treasured it, not even the author. By 1625 the number of Bacon's essays had increased in successive editions from ten to fifty-eight...Had Elizabethans been collectors of literary autographs, surely the manuscripts of the successive revisions of and the additions to the *Essays* should have been a prize worth striving for. But no one was interested, and in consequence Bacon's manuscripts of the *Essays* perished.⁵⁶⁷

This simply astonishing fraudulent version of history is simplistic, misleading and demonstrably false. In the edition of *Baconiana* his second editor and Rosicrucian Brother Thomas Tenison (afterwards Archbishop of Canterbury) presents an extract of Bacon's earlier will commencing on page 203 the cipher number for Francis Bacon

(100)/Shakespeare (103) in simple cipher-maybe a cryptic allusion to the manuscripts of his Shakespeare poems and plays:

*A Transcript (by the Publisher) out of the Lord Bacon's
last Will, relating especially to his writings.*

But towards that durable part of Memory, which consisteth in my Writings, I require my Servant, *Henry Percy*, to deliver to my *Brother* Constable, all my Manuscript-Compositions, and the Fragments also of such as are not Finished; to the end that, if any of them be fit to be Published, he may accordingly dispose of them. And herein I desire him, to take the advice of Mr. *Selden*, and Mr. *Herbert*, of the *Inner Temple*, and to publish or suppress what shall be thought fit.⁵⁶⁸

In his last will and testament drawn up in December 1625 shortly before his supposed death the year after Bacon again sets out directions for his vast collection of papers all stored up in cabinets, boxes and presses:

For my name and memory, I leave it to men's charitable speeches, and to foreign nations, and the next ages. But as to that durable part of my memory, which consisteth in my works and writings, I desire my executors, and especially Sir John Constable and my very good friend Mr. Bosvile [Sir William Boswell] to take care that of all my writings, both of English and Latin, there may be books fair bound, and placed in the King's library, and in the library of the university of Cambridge, and in the library of Trinity College...

Also whereas I have made up two register books, the one of my orations or speeches, the other of my epistles or letters, whereof there may be use; and yet because they touch upon business of state, they are not fit to be put into the hands but of some councillor, I do devise and bequeath them to the right honourable my very good lord bishop of Lincoln, and the chancellor of his majesty's duchy of Lancaster. Also, I desire my executors, especially my brother Constable, and also Mr. Bosvile, presently after my decease, to take into their hands all my papers whatsoever, which are either in cabinets, boxes, or presses, and them to seal up until they may at their leisure peruse them.⁵⁶⁹

Following his recorded death his enormous collection of papers, letters and writings were eventually divided between three of his very inward friends named in or witness to his final will, Dr William Rawley, Sir William Boswell and Sir Thomas Meautys. Virtually without delay his private secretary and first editor Dr Rawley published a rare commemorative volume entitled the *Memoriae* containing his own prose preface and 32 verses (1+32=33 Bacon in simple cipher) wherein several of its contributors clearly intimate Bacon was the concealed poet and dramatist, Shakespeare. He had lived with Bacon for the last decade of his recorded life and was privy to the secrets of the concealed life and writings of his Rosicrucian Master including his authorship of the Shakespeare poems and plays subtly alluded to in his preface to the *Memoriae* in which he states 'And indeed with no stinted hand have the Muses bestowed on him this emblem (for very many poems, and the best too, I withhold from publication)'.⁵⁷⁰ What were undoubtedly revealing verses that were by his own admission withheld by Dr Rawley have never been identified or located and their secret whereabouts remain a mystery. He soon after prepared the manuscript of the *Sylva Sylvarum* published in a single volume with Bacon's utopia *New Atlantis* (or, *The Land of the Rosicrucians*) in 1626/7. The inscription around the emblem of Old Father Time appearing on the title page of the Rosicrucian *New Atlantis* reads 'Tempore Patet Occulta Veritas' (In Time the Hidden Truth will be Revealed') conceivably with the suppressed verses held back from the *Memoriae*. From the manuscripts that came into his possession

over a period of three decades Dr Rawley published five different volumes of Bacon's writings culminating in *Resuscitatio Or, Bringing into Publick Light Severall Pieces, Of The Works, Civil, Historical, Philosophical, & Theological, Hitherto Sleeping; Of the Right Honourable Francis Bacon Baron* with the first English biography of Bacon 'whereby, I shall not tread too near, upon the *Heels of Truth*; Or of the Passages, and Persons; then concerned',⁵⁷¹ in which he states that there are some things about Bacon that are not 'communicable to the Publick'.⁵⁷² Very little is known about Dr Rawley's movements after Bacon's recorded death though he seems to have been moving in the circles of Queen Elizabeth of Bohemia (whose 'Rosicrucian' marriage was organised by Bacon) at The Hague in 1633:⁵⁷³

There were 'Rosicrucian' movements at The Hague, beginning as early as 1622...It seems possible that organized Freemasonry might have found at The Hague an encouraging soil in which to grow, perhaps out of, or in conjunction with 'Rosicrucianism'....⁵⁷⁴

It is not known at what date the other principal recipient of Bacon's manuscripts Sir William Boswell began moving in the rarefied circles of Bacon and his Rosicrucian Brotherhood. From 1619 to 1621 he served as secretary to the English Ambassador in Paris, Edward Herbert of Cherbury, a kinsman of William Herbert, Earl of Pembroke, then Grand Master of England one of the 'Incomparable Paire Of Brethren' to whom Bacon dedicated the 1623 Shakespeare First Folio.⁵⁷⁵ Boswell may have been secretary to Edward Herbert the Inner Temple lawyer one of Bacon's literary executors in the earlier version of his will. Edward was cousin to metaphysical poet George Herbert who assisted Bacon in translating into Latin the *De Augmentis Scientiarum* (1623) and was the dedicatee of Bacon's *Translation of Certaine Psalmes* (1625). George Herbert and Boswell were joint dedicatees of Lord Edward Herbert's *De veritate* in December 1622.⁵⁷⁶ In his will dated December 1625 Bacon instructed Boswell to 'take care of all my writings, both of English and Latin', placing him in a position of great secrecy and trust, some of which with the manuscripts bequeathed to the care of Dr Rawley, could and would not be communicable to the rest of the world. In July 1632 Boswell was appointed Resident Agent in The Hague a known hotbed of Rosicrucian-Freemasonry secret clandestine activity centred in and about the court of Elizabeth of Bohemia with Bacon's manuscripts under his guard where he remained until his death eighteen years later. After his death at The Hague some of Bacon's manuscripts passed to the Dutch scholar and editor Isaac Gruter who issued some of them in a near five hundred page volume *Francisci Baconi De Verulamio Scripta In Natvrali et Vniversali Philosophia* published under the imprint of Lodewijk Elzevier at Amsterdam in 1653. On its title page replete with Baconian-Rosicrucian ciphers appears an emblem depicting Pallas Athena, goddess of knowledge and wisdom usually seen shaking a spear from whence Bacon took his *nom de plume* Shakespeare, but in this instance bearing an inscription 'Ne Extra Oleas' ('Nothing but the Olive'). The olive is a divine symbol of peace to the world which also features prominently on the Rosicrucian-Freemasonic seal of the United States of America.

The transmission of the Bacon manuscripts left to Dr Rawley, Sir Thomas Boswell and Sir Thomas Meautys down to institutions where those that have survived are now reposed proved a long and complicated journey, one admirably traced by Dr Graham Rees and Richard Serjeantson.⁵⁷⁷ The single largest collection of Bacon's surviving manuscripts (the Harleian collection named after Robert and Edward Harley) resides in the British Library. An important collection of Bacon's manuscripts are held in the Lambeth Palace Library which is also the repository of the sixteen volume manuscript



FRANCISCI BACONI
De Verulamio
SCRIPTA
IN
NATVRALI
ET
VNIVERSALI
PHILOSOPHIA.



AMSTELODAMI,
Apud Ludovicum Elzevirium,
c1515c1111.

Fig. 58 The title page of the 1653 edition of Bacon's works depicting Pallas Athena (Shaker of the Spear) from where he derived his nom de plume Shakespeare

collection of the papers of his brother, Anthony Bacon. The Public Record Office hold a significant collection of surviving Bacon's manuscripts in his own autograph and in the hand of some of his scribes. In addition to these UK institutions other Bacon MSS are scattered around the institutions and libraries of Europe and the United States (and despite the astonishing comments of acting director Dr McManaway) in the Folger Shakespeare Library.

In the *Index of English Literary Manuscripts* its editor Peter Beale discusses and lists more than three hundred surviving Bacon manuscripts, scribal copies and other copies of his writings. Seventeenth century lists of Bacon's works and his MSS are deposited in the British Library and the Public Record Office. His autograph is found in his 'dramatic works' presented on behalf of Essex in the 1590s and the six speeches for the festivities at the Christmas Gray's Inn Revels 1594-5. Other MSS where they do not contain his autograph were most probably transcribed by his various amanuenses in his employment or were copied directly from Bacon's own papers. Other extant MSS derive from the manuscript papers left at his death to Dr Rawley, and others. Included in his miscellaneous papers in the British Library and the Public Record Office are major collections of his manuscript letters and a number of his original letters are among the papers of his brother Anthony Bacon at Lambeth Palace and some among the Cecil Papers at Hatfield House with many more scattered around UK and US libraries and institutions with collections of transcripts scattered around an even larger number. The British Library also holds early lists of Bacon's MSS containing his speeches and Beale also lists numerous Bacon MSS under verse and prose in various stages of completion. The following represents only a selection

Advertisement touching a Holy War; An Advertisement touching Private Censure; An Advertisement touching the Controversies of the Church of England; Apology in Certain Imputations concerning the late Earl of Essex; Apophthegms New and Old; A Brief Discourse touching the Happy Union of Scotland; Certain Considerations touching the Better Pacification and Edification of the Church of England; Certain Considerations touching the Plantation in Ireland; Certain Observations on a Libel; Considerations touching a War with Spain, Considerations touching the Queen's Services in Ireland; A Discourse touching Intelligence and the Safety of the Queen's Person; The History of the Reign of King Henry VII; The Beginning of the History of the Reign of King Henry VIII; Of the True Greatness of the Kingdom of Britain; Promus of Formularies and Elegancies; Sylva Sylvarum; or a Natural History.

The Latin works:

Filum Labyrinthi, sive formula inquisitionis; Valerius Terminus; Abecedarium novum naturae, Aphorismi de dissolutione reru, quae fit per aetatem, in inanimatis, et consistentibus; Aphorismi de jure gentium maiore siue de fontibus iustitiae & juris; Cogitata et visa de interpretatione naturae; Cogitationes de scientia humana; Comentarius solutus sive pandecta, sive ancilla memoriae; De sapientia veterum; De vijs mortis, et de senectute retardanda, atque instaurandis uiribus; Filum Labyrinthi; sive inquisitio legitima de motu; Fragmentum libri Verulamiana, cui titulus Abecedarium naturae; Historia densi et rari; Historia et inquisitio de animato et inanimato; Historia vitae et mortis; In felicem memoriam Elizabethae, Angliae Reginae; In Henricum, Principem Walliae elogium; Inquisitio de magnete; Inquisitio legitima de motu; Meditationes sacrae; Redargutio philosophiarum, Temporis partus masculus.

Under the heading 'Dramatic Works':

A Device to Entertain the Queen at Essex House, 17 November 1595; Copy of five speeches in a volume of prose works connected with the Court or state affairs; Copy of five speeches in a volume of state papers; Copy of six speeches in a volume of state papers; Copy of six speeches, headed 'A Dialogue between A Melancholly dreaming Hermet A Mutinous Brainesick Soldiour & A Busie teadious Secretarie'; Copy of the Secretary's speech, headed 'Speech at the tilt by Essex'; Under the sub-heading Gesta Grayorum: Copy of the Prince's speech to the Counsellors and the speeches of the first three Counsellors in a verse miscellany; Under the sub-heading Of Tribute, or Giving what is Due: Copy of the complete entertainment, headed 'Mr ffra: Bacon of tribute or giuing that w^{ch} is due'; Copy of the complete entertainment, with corrections in another hand, headed 'Tribuit or Givinge that w^{ch} is due; Copy of the third and fourth speeches (i.e. 'Mr Bacon in prayse of knowledge' and Mr Bacons Discourse in the praise of his Souereigne'; Copy of a speech of apology for the absence of the Earle of Essex spoken by Henry Radcliffe at a royal tournament in 1596, and Northumberland MSS. originally owned by the Duke of Northumberland.

Under the heading *Essays*:

Copy of 34 Essays in the hand of an amanuensis, with Bacon's autograph corrections and revisions; headed 'The Writings of S^r ffrancis Bacon kn^t'; Ten Essayes first pub. London 1597; 38 Essaies pub. London, 1612; 58 Essayes or Counsels, Civill and Morall pub. London, 1625'; Copy of Bacon's intended dedication of the Essays to Prince Henry; Copy of two essays (Of Faction and Of Negotiating); Copy of 21 Essays; Copy of Ten Essays; Copy of Four Essays; Second Copy of Four Essays; Copy of three Essays; Of Seditions and Troubles; Of Seditions and Troubles, Of the True Greatness of Kingdom and Estates.

Of some of the above several Bacon manuscripts copies are deposited in the Folger Shakespeare Library, as well as some of his legal writings, not included in the above:

Original manuscripts letters, Folger Shakespeare Library (MS X.d.174)

Transcripts of speeches, Folger Shakespeare Library (MS V. a. 206)

Humble Submissions and Supplications, Folger Shakespeare Library (MSS V. 192)

Extracts, Folger Shakespeare Library (MS V. a. 263)

Apocrypha, Folger Shakespeare Library (MS V. a. 208)

Five copies of 'The world's a bubble, and the life of man':

Folger, D347 pp. 8-9

Folger, MS V. a. 96, f. 6r-v

Folger, MS V. a. 162, ff, 5v-6

Folger, MS V. a. 262, p. 99

Folger, MS V a. 345, pp. 143-4

Three copies of *Considerations touching the Queen's Service in Ireland*:

Folger, MS V. a. 239, pp. 166-94

Folger, MS V. b. 132, pp. 15-20

Folger, MS V. b. 234, pp. 113 29

Maxims of the Law:

Folger, MS V. a. 240

Ordinances in Chancery:

Folger, MS V. a. 121, ff. 130-7v

Copy of six speeches c. 1600

Folger, MS V. b. 213, pp. 1

Copy of the Secretary's speech, headed 'Speech at the tilt by Essex'

Folger, MS V. b. 214, f. 200.⁵⁷⁸

Following his misleading comparison with Bacon's manuscripts McManaway in the official Folger Shakespeare Library pamphlet on the authorship controversy proceeds to address the lack of letters and private papers and the conspicuous absence of any mention of books in the will of Shakspeare of Stratford. None of which need detain us. With his false fictional story to account for all this completed the tone turns decidedly chilly before he unloads another fraudulent statement masquerading for what passes as Stratfordian truth in the minds of the schoolmen and the ignorant deluded masses:

In no case has it been possible to produce a shred of evidence that anyone in Shakespeare's day questioned his authorship. And not one fact has been discovered to prove that anyone but Shakespeare was the author.⁵⁷⁹

But he had still not quite finished:

Much ingenuity has been expended in the attempt to find in Shakespeare's works hidden messages about their authorship, and there is a voluminous literature on the subject. This has all been subjected to impartial scrutiny by two eminent cryptanalysts, William F. and Elizebeth S. Friedman, who in *The Shakespearean Ciphers Examined* (1957) prove conclusively that no crypto-system hitherto used by anti-Shakespeareans meets the basic tests of cryptology. Determined to avoid partisanship, they refuse to make a search for codes or ciphers, but they give assurance that none of the supposed discoveries thus far reported has any validity.⁵⁸⁰

During the years Giles E. Dawson, curator of books and manuscripts at the Folger Shakespeare Library, Louis B. Wright, Director of the Folger Shakespeare Library, and Professor James McManaway, one time acting Folger director, were planning and preparing their writings aimed at who they described as anti-Shakespeareans or anti-Stratfordians, and in the case of the latter drawing on the authority of the Friedmans; the Friedmans themselves were also busy researching, planning and writing their own work on the Shakespeare authorship controversy.

Following the end of the Second World War Elizebeth Friedman began researching the work on the subject of the presence of codes and ciphers in the Shakespeare plays

which had brought the Friedmans together at Riverbank some three decades earlier. It was to take another decade of their lives and in its early stages her husband William Friedman was still working for American Intelligence liaising with MI6 on matters of the highest secrecy regarding the latest ciphers machines and other listening devices that was to shape the future direction of post war Europe and the rest of the world. All the secrecy and lies, lying to colleagues, friends and family, about his work for the US government and its intelligence agencies and the secrecy and lies surrounding his time at Riverbank would intermittently take its toll on his mental health and stability. By Christmas 1949 writes his biographer Friedman was ‘profoundly depressed and by the following months appears to have been considering suicide once again.’⁵⁸¹ He entered Mt Alto Hospital where he was placed with other psychotic patients but showing little progress in March 1950 Friedman entered the Psychiatric Unit of George Washington University for electroshock therapy. After receiving 6 electroshock treatments ‘each without incident or complication’ reported his psychiatrist, Friedman was discharged from hospital on 11 April and returned home to his wife Elizebeth for support and convalescence.⁵⁸²

In the early 1950s the Friedmans decided to move from their Military Road home on the outskirts of the District of Columbia to a townhouse on 2nd Street Southeast on Capitol Hill. With the amount of research needed for the work the move allowed them to take advantage of the unrivalled Bacon and Shakespeare resources at the Folger Shakespeare Library and Library of Congress. The libraries were in walking distance of their new dwelling and the Friedmans spent countless hours each day at the Folger carrying out intensive research into the various complex and difficult branches of the subject which they developed into a 611 page manuscript. The title of the manuscript was very carefully and precisely selected by the Friedmans (who secretly knew that Bacon wrote the Shakespeare works) ‘*The Cryptologist Looks at Shakespeare*’ which has 33 letters the number representing Bacon in simple cipher-thus the cryptographic message conveyed by the Friedmans-reads Bacon is Shakespeare.

The Friedmans enthusiastically entered their manuscript for the Folger Shakespeare Library competition on Elizabethan history which included Shakespeare held in 1955. While the judges were considering the various entries, the NSA sent Friedman to liaise and improve collaboration with the British at GCHQ in Cheltenham. After five weeks Friedman was back in Washington.⁵⁸³ Less than a week later on 3rd April 1955 he suffered a heart attack and he was immediately rushed to the George Washington Hospital. As fate would have it that morning paper carried the headline ‘Washington Couple Win Folger Shakespeare Award’. His recovery was slow and it was another three months till he was discharged from hospital in the July under strict instructions to avoid stress and not to overdo things.

The publication rights to the book had been secured by none other than Cambridge University Press, Francis Bacon’s old university. It was during his time at Cambridge that Bacon first secretly set in motion his Rosicrucian Brotherhood and many of its early members were drawn from the university and several Cambridge scholars wrote some of the eulogies in the *Memoriae* published by Dr Rawley insinuating that Bacon wrote the Shakespeare works. The Cambridge University Press, the oldest university press in the world, was granted its letters patent by King Henry VIII (Bacon’s royal grandfather) in 1534 and it was to the University of Cambridge that Bacon dedicated *De Sapientia Veterum* (*The Wisdom of the Ancients*) in 1609:

To His Nursing-Mother The Famous University of Cambridge.

Since without philosophy I care not to live, I must needs hold you in great honour, from whom these defences and solaces of life have come to me. To you on this account I profess to owe both myself and all that is mine; and therefore it is the less strange, if I requite you with what is your own; that with a natural motion it may return to the place whence it came...

Your most loving pupil,

FRA BACON.⁵⁸⁴

But before anything could proceed Friedman curiously submitted the manuscript to the NSA for “security clearance”,⁵⁸⁵ as far as the present writer is aware, the only time a work on Shakespeare had required this kind of secret official blessing from the most secretive intelligence agency in the United States of America, which there is reason to believe also has secret links to Bacon’s Rosicrucian Brotherhood.

The editorial team at the Cambridge University Press insisted the manuscript was strictly edited and reduced in size. With Friedman still recuperating from his heart attack the responsibility of editing it for the most part fell to his wife, nevertheless Elizebeth continually consulted him. With security clearance received from the NSA the personnel at Cambridge University Press went over it word by every single word:

Two editorial assistants in England read the manuscript cold and were instructed to cut, cut, cut. The result was sent chapter by chapter across the Atlantic and the Friedmans read, agreed or disagreed as the case might be, and returned the pages. Parts of the book were thus being set while other parts were still being prepared for the printer.⁵⁸⁶

The Shakespearean Ciphers Examined was published by Cambridge University Press on ‘4 October 1957’.⁵⁸⁷ The reason for the careful and precisely selected publication date is it conceals a Baconian-Rosicrucian cipher. There are seven letters in the word October and the numbers in the date $4+1+9+5+7=26$: $7+26=33$ represents Bacon in simple cipher and if the null (9) is dropped from the date it leaves the number 157 Fra Rosicrosse in simple cipher conveying the hidden cryptographic message (from the Rosicrucian Brotherhood) Bacon, Brother of the Rosy Cross, is Shakespeare.

Following security clearance from the invisible hierarchy at the National Security Agency and the extremely close oversight and intense minute editorial scrutiny from unseen personnel at Cambridge University Press, in the preface to *The Shakespearean Ciphers Examined*, the Friedmans express their coded indebtedness to the one time acting director of the Baconian-Rosicrucian-Freemasonic Folger Shakespeare Library and editor of its organ *The Shakespeare Quarterly*, for suggesting their manuscript should be turned into a book. To the current director of the secret Baconian institution Dr Louis B. Wright and its various technical staff, most notably Dr Giles E. Dawson, the Friedmans express their coded gratitude for their unstinting support and access to the Folger’s collection of Shakespearean and most importantly its ‘anti-Stratfordiana’ a revealing phrase from professed neutrals who ‘have no professional or emotional stake in any particular claim to the authorship of Shakespeare’s plays’:⁵⁸⁸

For the original suggestion that this material (much of which had first been embodied in a lecture) be made into a book-length manuscript we are indebted to Dr James G. McManaway, editor of *The Shakespeare Quarterly*, who also gave us much encouragement throughout its preparation. To the Director of the Folger Shakespeare Library, Dr Louis G. Wright, and the principal members of his technical staff, Dr McManaway, Dr. E. E. Willoughby, Dr Giles E. Dawson, Miss Dorothy Mason and others, we are grateful for assisting our access to and study of the Library’s collection of Shakespeareana and, even more important, its anti-Stratfordiana, the largest collection of its type in the United States.⁵⁸

Two years later the Friedmans still basking in the glory of their critical acclaim from the international press, professors, academics and ordinary schoolmen the world over (few if any who knew scarcely anything about Baconian cryptology), generated by their fraudulent book *The Shakespearean Ciphers Examined*, wrote to the Director of the Folger Shakespeare Library along with returning their 'prize-winning' manuscript:

Dr. Louis B. Wright,
Director, The Folger Shakespeare Library,
Washington, D. C.

9 June 1959

Dear Dr. Wright:

When the Folger Shakespeare Library awarded as one of its two literary prizes in 1955 we were astonished and highly pleased. The invitation then to submit the manuscript to The Cambridge University Press was an opportunity which we eagerly accepted. The Press wanted the original typescript of our Mss. and you were gracious enough to send it to us for that purpose.

In the distillation of the large amount of material in the original Mss in order to get it within bounds of what the Press thought practicable for a book that might have a wide appeal among the general public, we had of course to do much cutting and trimming. When the manuscript for the final version was ready our original prize-winning typescript lacked many pages, photographs, photostats, and diagrams. After the book was off the press and the many photographs, etc., were returned to us we set ourselves the task of restoring the material to make it conform to the exact text of the original prize-winning version. But there were many interruptions and delays in accomplishing our task, including those attendant upon sending letters and packages back and forth across the Atlantic to and from the publisher and it is only now that we have restored our Mss to its pristine form, to be deposited in The Folger Shakespeare Library, where it may be available for consultation by scholars and those interested in the authorship question. We have checked the Mss sheet by sheet (our use of a numbering machine helped enormously in this check) and we know that the Mss is now intact, with all the photographs, etc., that accompanied the original, prize-winning version. Though quite bulky we hope there will be space for in the Library. We may wish to consult it ourselves some day!

We are grateful to you for not even once reminding us of the obligation to return the Mss, for it would certainly have been within your right to have demanded it as soon as the book had been published. Included with the Mss is a copy of the award presented to us in April 1958 by the American Shakespeare Festival Theatre and Academy.

With reiterated thanks for these and many other courtesies, we are

Most sincerely,

William F. Friedman

Elizebeth Smith Friedman.⁵⁹⁰

Within a few days the Director of the Folger Shakespeare Library (a secret Baconian-Rosicrucian-Freemasonic institution) who had encouraged the Friedmans to turn their research into a book-length manuscript, and after security clearance from the invisible powers at the National Security Agency, was subsequently published by the unseen syndics of Cambridge University Press, succinctly thanked them for its return:

June 12, 1959

Dear Col. and Mrs. Friedman:

Thank you for your gracious letter of June 9 in which you present the manuscript of your prize book to the Folger Library along with the copy of the award from the American

Shakespeare Festival and Academy. We are happy to accept these and will treasure them. We hope that you will want to refer to the documents yourselves-or at least to some documents that will bring you often to the Folger Library. It is always a pleasure to me to see you here.

With cordial good wishes,
Faithfully yours.
Louis B. Wright.⁵⁹¹

Their manuscript carefully and precisely entitled by the Friedmans (lest we forget the most celebrated cryptographers of the twentieth century) ‘The Cryptologist Looks at Shakespeare’ (containing 33 letters: 33 Bacon in simple cipher) is prefixed with a quotation from Blaise de Vigenère’s *Traicte des Chiffres* (1586). Bacon had known Blaise de Vigenère from his time in France and many Baconians believe that Bacon was in some way involved in the preparation and publication of *Traicte des Chiffres*. Sir Edwin-Durning Lawrence was of the view there was reason to believe that Blaise de Vigenère may have been a mouthpiece for Bacon and his Bi-literal Cipher, which the Friedmans stated was undoubtedly present in the Shakespeare works during their time at Riverbank, and thereafter lied about for the rest of their lives:

All the things in the world constitute a cipher...all nature is merely a cipher and a secret writing. The great name and essence of God and his wonders, the very deeds, projects, words, actions, and demeanor of mankind...what are they for the most part but a cipher? For beneath a pretended and hypocritical appearance of zeal, piety,...and other...praiseworthy purposes which may be compared to the characters of a double cipher...men conceal for themselves a secret meaning of their...hatreds, rancor, treason,...; and the alphabet to which these things are written is known only to Him who penetrates all disguises.

Blaise de Vigenère
Traicte des chiffres
(1586), p. 53b; 54a,b.⁵⁹²

The passage has a very Baconian ring to it. Its first line ‘All the things in the world constitute a cipher’ reminds us of the line from *As You Like It* ‘All the world’s a stage, and all the men merely players’ (2:7:139-40) that is followed by ‘all nature is merely a cipher and a secret writing’, the very thing (i.e. nature) Bacon spent his whole life exploring. It feels as if the well-practiced cryptographers the Friedmans were in code cryptically trying to tell us something through this passage carefully selected by them to prefix their manuscript ‘The Cryptologist Looks at Shakespeare’. The Friedmans knew from experience that all the world’s a stage one full of actors playing their parts. The Friedmans were accomplished actors themselves, so accomplished they managed to fool virtually the whole world. It is clear from the above passage that its author and the Friedmans who quote it, fully knew that beneath the pretended and hypocritical appearance of honesty and integrity which can be compared to a double cipher people conceal secrets and their secret meanings from others around them and from the world itself. It was something the Friedmans had done all their lives when repeatedly lying to their family, friends, and colleagues, as well as Shakespearean world by pretending and lying that there were no Baconian ciphers in the Shakespeare works, which they had known to be untrue from their days at Riverbank, a monumental lie they repeated *ad nauseam* until the day they died.

THE SHAKESPEAREAN CIPHERS EXAMINED-REXAMINED

People who are not themselves experts in some particular study are almost
bound to accept the pronouncements of those who are.

[William F. Friedman and Elizebeth S. Friedman, *The Shakespearean
Ciphers Examined* (Cambridge University Press, 1957), p. 245]

You can fool all the people some of the time, and some of the people
all of the time, but you cannot fool all the people all the time.
[Abraham Lincoln, President of the United States of America]

It was no coincidence *The Shakespearean Ciphers Examined* by William F. Friedman and Elizebeth Friedman was published in the year 1957. The year and number, as we are talking about an important work on Baconian-Rosicrucian ciphers, is a propitious one. Some three decades after the supposed death of Bacon, his inward confidant Dr Rawley, a member of his Rosicrucian Brotherhood, who secretly knew Bacon penned the Shakespeare works and was familiar with his cipher systems, published the first English biography of Bacon in 1657. A century later the Freemason Lewis Theobald set forth his eight volume edition of *The Works of Shakespeare* printed for Jacob Tonson, the younger, *et al*, who held a monopoly on the copyright of the Shakespeare works) in 1757, replete with Baconian-Rosicrucian ciphers. His editor and biographer James Spedding issued the first of his seven volumes of *The Works of Francis Bacon* in 1857 along with his seven volume edition of *The Letters and Life of Francis Bacon* also replete with Baconian-Rosicrucian ciphers secretly conveying that Bacon wrote the Shakespeare works. This still standard edition of the life and works of Bacon has never been surpassed and it remains the most cited and referenced work in the whole of the canon. The cryptographic and numerical pattern was repeated once more when *The Shakespearean Ciphers Examined* by William Friedman and Elizebeth Friedman was published by Cambridge University Press in 1957. What the world does not know and will be revealed here for the first time, is this book written by the cryptographers William and Elizebeth Friedman also includes hidden Baconian-Rosicrucian ciphers which secretly convey that Bacon is Shakespeare. The occult significance of the years 1657, 1757, 1857 and 1957, is if the second digit of each of these years is removed it leaves the special number 157 representing Fra Rosicrosse (or Brother of the Rosy Cross) in simple cipher, indicating that the Rosicrucian Brotherhood were secretly instrumental in the publication of these works, one founded by Bacon, who then and now carefully guard over the secret of his life and writings, including his concealed authorship of the Shakespeare works.

While William Friedman was still working at the heart and pinnacle of top secret US Intelligence work that involved regular contact with the British Intelligence services at GCHQ, MI5 and MI6, it seems someone directed, and we know senior members of the Folger Shakespeare Library encouraged, the Friedmans to produce a manuscript on the authorship of the Shakespeare plays published by Cambridge University Press.

Their shambolic typescript is badly organized and presented and poorly written. The editorial team at Cambridge University insisted the typescript was strictly edited and reduced in size. Two editorial assistants at Cambridge University Press were assigned to carefully scrutinize the typescript and chapter by chapter read and reread it sending back and forth to the Friedmans in Washington for them to agree and disagree with

the suggested cuts with the pages then returned back over the Atlantic to Cambridge.⁵⁹³ The important illusion had to be and was carefully stage managed. The Cambridge University Press team insisted the title of the typescript was changed to the eventual title of the book and it was published on the carefully selected date of 4 October 1957. As we have seen the reason for the publication date was twofold; firstly, there are seven letters in October and the addition of the numbers in the date $4+1+9+5+7=26$: $7+26=33$ Bacon in simple cipher and if the null '9' is dropped from the date 1957 it leaves the secret Rosicrucian number 157 Fra Rosicrosse in simple cipher.

A cursory comparative glance at the typescript and the finished published book strongly indicates that the finished product was not in effect written by the Friedmans alone. They provided the raw material in the poorly written typescript which was subsequently partly rewritten and polished up by a specially assigned editorial and writing team at Cambridge University Press, the Friedmans without plainly stating and revealing their true debt, adroitly glanced at in the carefully worded preface:

We acknowledge also our debt to Ronald Mansbridge, Manager of the American Branch of the Cambridge University Press, for his determined faith and encouragement in the project of making a book from our prize-winning manuscript; to Dr Sidney Kramer, bibliographer turned bookseller, for his continuing exhortations to us to continue when our faith in the project lagged; to Rear-Admiral Dwight M. Agnew, USN, Retired, for a valuable suggestion relating to the manner in which we deal with some of our material; and most particularly, we are indebted to Mr M. H. Black and Mr. R.A. Becher, of the Cambridge office of publishers, for their skilled aid in the condensation and revision of our manuscript.⁵⁹⁴

A number of misconceptions and misunderstandings surround the evolution and contents of their manuscript *The Cryptologist Looks at Shakespeare* and its published counterpart *The Shakespearean Ciphers Examined*. To the present day there is still complete confusion concerning the precise contents of the typescript. With regards to its evolution William Friedman's biographer Ronald W. Clark states the manuscript consists 'of a 1,000 pages, a massive survey which, with no time for revision, they entered for the Folger Shakespeare Library competition of 1955.'⁵⁹⁵ This statement was repeated in 2017 by Elizebeth Friedman's biographer Stuart Smith 'Their jointly written thousand page manuscript "The Cryptologist Looks at Shakespeare," won a \$1,000 prize for literature from the Folger Library.'⁵⁹⁶ The unguided reader might not unnaturally form the impression that the Friedmans' researches into the Shakespeare controversy running to a 1,000 manuscript pages assumed for them an impressive comprehensive expertise and authority on the whole authorship question, beyond perhaps what was warranted. Its contents have remained unknown to the world partly because it remains virtually inaccessible to nearly all students and partly because no 'professional scholar' has closely looked at the typescript and progressed to examine its contents in conjunction with its published counterpart.

The typescript at the Folger Shakespeare Library comprises not of a 1,000 pages but 611 pages. The format of the typescript is functional and poorly arranged. There is moreover a marked difference in the style of writing of the typescript and the book. As stated the book has been subjected to a good deal of intensive editorial attention and benefits from an acutely discernible improvement in its presentation and standard of writing as a result of what appears to have been several rewrites by the Friedmans in very close collaboration with the editorial team of the Cambridge University Press. Broadly speaking the double-spaced typescript covers more or less the same ground, albeit differently arranged, and contains little of importance which is not included in the book, though there are a number of important passages in the typescript which

were excised from the book. The typescript is made up of seventeen chapters, which is two chapters less than the book, which comprises of nineteen chapters condensed into 303 pages:

BOOK		TYPESCRIPT	
<i>Preface</i>	page	vii	
<i>List of Illustrations</i>		xiii	
<i>Introduction</i>		xv	PAGE
I The Great Controversy		1	I
II Cryptology as a Science	15	INTRODUCTION	
III Ignatius Donnelly and <i>The Great Cryptogram</i>	27	I - The Background: Part I: The Origins of the Great Controversy.	16
IV The Cipher in the Epitaph	51	II - Some Pros and Cons f the Controversy	
V Dr Owen and his Word Cipher	63	III - Early Cipher claims: Ignatius Donnelly and the Great Cryptogram.	67
VI A Miscellany	77	IV - Dr. Owen and his Word Cipher	102
VII Acrostics and Anagrams	92	V - The Biliteral Cipher and Elizabeth Wells Gallup	122
VIII The Long Word and Other Anagrams	102	VI - Acrostics and anagrams: Walter Conrad Arensberg	172
IX The String Cipher of William Stone Booth	114	VII - Further Acrostics: William Stone Booth and others	242
X Walter Conrad Arensberg	137	VIII - Further anagrams: Johnson, Cunningham and Bauer - a case history	311
XI The Strange Story of Dr Cunningham and Maria Bauer	156	IX - <i>And yet more anagrams: The long word and others.</i>	341
XII Odd Numbers	169	X - The cipher on the tombstone and in the Psalms	364
XIII The Biliteral Cipher and Elizabeth Wells Gallup	188	XI - Numerical Cipher “seals;” Rosicrucian emblems; Baconian numerology	396
XIV Mrs Gallup and Colonel Fabyan	205	XII - The Gallup story, continued.	431
XV Elizabethan Printing and its bearing on the Biliteral Cipher	216	XIII -The Biliteral Cipher, continued: General Cartier’s findings.	481
XVI A Study of the Gallup Decipherments	230	XIV - The Biliteral Cipher continued: Mr. Ewen and Mr. Curtis	506
XVII General Cartier and the Biliteral Cipher	245	XV - The Biliteral Cipher and some speculations in psychology.	552
XVIII The Biliteral Cipher: Experiments and Deductions	263	XVI - Lost in Labyrinthian Mazes.	575
XIX Conclusion	279	XVII - Conclusions	597
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Predictably and inevitably *The Shakespearean Ciphers Examined* was met with a chorus of universal praise from the international press, reviewers, commentators and academics. They were all agreed the book had finally put to rest once and for all the Baconian controversy. *The New York Times Book Review* stated the Friedmans buried ‘these pseudocryptograms beneath a mass of evidence as crushing as an avalanche.’⁵⁹⁸ More of the same was fanned and repeated by the international media throughout the English speaking world, major book review organs, in learned and scholarly journals, and popular magazines in order to reach a wider general public. The commendations it received was not so much based upon a critical evaluation of the work’s merits, in virtually all instances the critics and reviewers were woefully ill-equipped to evaluate the finer points of cryptology of which they knew very little, and the finer points of evidence demonstrating Bacon’s authorship of the Shakespeare works of which they knew less. Rather, they were all merely swept along by the airy wind of reputation. The critics were all in agreement. The authoritative and definitive work repudiated and debunked the claim there were Baconian ciphers in the Shakespeare works. Since its publication during the subsequent decades this established orthodox dogma and doctrine has been reinforced by each and every so-called Shakespeare authority from Professor Samuel Schoenbaum, through to Professor Sir Stanley Wells and Professor Sir Jonathan Bate, and the recent biographers of William and Elizebeth Friedman to

the present day.⁵⁹⁹ Yet it is all just a Baconian-Rosicrucian-Freemasonic *ludibrium* or illusion. My Lord, what easily deceived fools these mortals be!

Let us re-examine *The Shakespearean Ciphers Examined* a work on cryptography or codes and ciphers by William and Elizebeth Friedman, the greatest cryptographers of the twentieth century, beginning with its title page replete with Baconian-Rosicrucian ciphers, revealing and confirming that Francis Bacon is Shakespeare. For the purpose of encipherment the title page is divided into halves above and below the Cambridge University crest. In the top half of the title page there are 33 words printed in block capitals Bacon in simple cipher comprising 190 letters: $190-33=157$ Fra Rosicrosse. In the bottom half of the page there are 29 block capital letters and 4 digits in the date: $29+4=33$ Bacon in simple cipher. The whole page contains a total of 38 block capital words and 1 ampersand: $38+1=39$ F. Bacon in simple cipher. Moreover the 190 block capital letters in the top half of the page minus the 29 block capital letters and the 4 digits in the date of the bottom half $190-33=157$ Fra Rosicrosse in simple cipher.

If we turn to the first page of the Preface commencing the work it will immediately be observed that the first letter on the first line is a very large capital **F** and the first letter of the first word on the last line in the paragraph is a b in believe, providing the initials of Francis Bacon. Below the large capital **F** if we use the d as a reverse b we have the letters C, O, A, N, B an anagram of BACON thus giving us **F** BACON. Within the large capital **F** there is a total of 135 roman letters and 2 capital letters $135-2=133$ a double cipher for Francis Bacon (100)/Bacon (33) in simple cipher. The whole paragraph contains a total of 67 words Francis in simple cipher. The 67 words and 133 roman letters added to the capital **F** equals 203 a double cipher for Francis Bacon (100)/Shakespeare (103) in simple cipher. The last paragraph has a total of 67 words again Francis in simple cipher and if we subtract the 1 word in quotation marks ('inside'): $67-1=66$ a double cipher for Bacon (33)/Bacon (33) in simple cipher.

The whole page contains a total of 33 lines of printed text again Bacon in simple cipher. Finally the last printed line of text contains 46 letters and beneath it in roman numerals vii for the number 7: $46+7=53$, an occult number in Baconian-Rosicrucian-Freemasonic circles denoting the letters SOW in simple cipher standing for SONS OF WISDOM or members of Bacon's Baconian-Rosicrucian-Freemasonry Brotherhood.

The first page of the Introduction likewise comprises 33 lines of printed text: 33 Bacon in simple cipher. It commences with a very large capital **S** as part of the word SHAKESPEAREAN in block capital letters followed by SCHOLARS also in block capital letters. Within the very large capital **S** there is a total of 110 roman letters: $1+110=111$ Bacon in kay cipher. There are 33 block capital letters in INTRODUCTION SHAKESPEAREAN SCHOLARS Bacon is simple cipher. In the western world our mind and eyes are trained from birth to read from left to right but from the beginning of time cryptographers have inserted ciphers that can be read from left to right or right to left as well as upwards and downwards in any given text. If we now take a look in a straight line beneath the capitalised SHAKESPEAREAN we see the letters a, b, & c an anagram of the contraction BAC indicating BACON and below the letter c the word 'is', and below this slightly to the left the letters CON thus we are able to discern the hidden message BACON is SHAKESPEARE. To reinforce this, directly beneath the letters CON there is another group of letters CANOB which is another anagram for BACON allowing us to read up the page again that BACON IS SHAKESPEARE.

From this the fraudulent Friedmans make the following statement:

SHAKESPEAREAN SCHOLARS have often had to deal with arguments that Shakespeare did not have the birth, breeding or education necessary to write the plays. The evidence

THE
SHAKESPEAREAN CIPHERS
EXAMINED

AN ANALYSIS OF CRYPTOGRAPHIC
SYSTEMS USED AS EVIDENCE THAT
SOME AUTHOR OTHER THAN
WILLIAM SHAKESPEARE
WROTE THE PLAYS COMMONLY
ATTRIBUTED TO HIM

BY
WILLIAM F. FRIEDMAN
&
ELIZEBETH S. FRIEDMAN



CAMBRIDGE
AT THE UNIVERSITY PRESS
1957

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Fig. 59 The deciphered title page of *The Shakespearean Ciphers Examined* by William and Elizebeth Friedman

PREFACE

FOR almost two hundred years the authorship of the plays commonly attributed to Shakespeare has been disputed; and a good many writers, in contesting the attribution, have made specific claims for someone else as author. Some of these writers have supported their claims with cryptographic proofs: that is, with evidence derived from the solution of ciphers or other cryptographic systems incorporated, they believe, in the writings themselves.

The late Dr Logan Clendening, reviewing Charles Allen's *Notes on the Bacon-Shakespeare Question* in *The Colophon* of September 1939, said that Allen dealt 'clearly and soberly with all the arguments except the cipher and cryptography allegations'; and added, 'a book by an unbiased cryptographer is badly needed'. In a letter written in 1941 to one of the authors of this book, Dr Clendening said: 'I wish you had time to do a study of the cryptographic work on the Bacon-Shakespeare controversy... I am... a thorough skeptic about the Baconian authorship of Shakespeare, but in all my studies I have never been able to evaluate critically the cryptographic literature, including Mrs Gallup's biliteral cipher, and old Ignatius Donnelly's work of long ago.'

Even among the anti-Stratfordians, a writer like A. W. Titherley, with a scientific and impartial attitude (to this question at any rate), could say in his *Shakespeare's Identity*: 'as to the validity of "signatures" decoded by modern Baconians, the present writer is not competent to judge'.

We have long intended to present a full-scale appraisal of the cryptographic arguments from the point of view of the professional cryptanalyst. We have both been interested in the problem for many years; that we also have some personal or 'inside' knowledge will appear in later chapters. The preparation of the study has been delayed by our professional duties during and since the Second World War; meanwhile

Fig. 60 The deciphered preface page of *The Shakespearean Ciphers Examined* by William and Elizebeth Friedman

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INTRODUCTION

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SHAKESPEAREAN SCHOLARS have often had to deal with arguments that Shakespeare did not have the birth, breeding or education necessary to write the plays. The evidence brought forward by both sides in this particular argument is necessarily conjectural, and must therefore always be inconclusive. On the other hand, claims based on cryptography can be scientifically examined, and proved or disproved. In this book we examine the cryptographic evidence used to support the thesis that someone other than Shakespeare wrote the plays.

Many of the anti-Stratfordians who use cryptography to support their arguments have two aims: they wish to prove that Shakespeare did not write the plays, and they also wish to prove that someone else—usually Bacon—did. Of course other claimants have been brought forward; and there is even one subtle sceptic who, while not accepting Shakespeare, has found in the First Folio cryptographic evidence which has convinced him that there are hidden messages proving the writer to be a man whose Christian name was Will and whose surname began with 'Shake' (see ch. vi). There are also those who find that Shakespeare, like Homer, was a syndicate—or, to use the current jargon of American scholarship, a 'project'.

At the outset we must make two things clear. First, the science of cryptology (which concerns itself with secret writing by means of codes and ciphers) is a branch of knowledge which goes back far into the past—certainly beyond Elizabethan times. In the sixteenth century it was abundantly used. It is also certain that Francis Bacon (the leading contender for the authorship of the plays) gave a brief account of cryptography, and invented a unique and admirable cipher system which we shall later describe. So it is clear that ciphers could quite certainly have been used, and by Bacon in particular, to conceal a claim to the true authorship of any work. The question of course—as Prof. E. R. Vincent pointed out in the parallel case of

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Fig. 61 The deciphered Introduction page of *The Shakespearean Ciphers Examined* revealing that Bacon is Shakespeare

brought forward by both sides in this particular argument is necessarily conjectural, and must therefore always be inconclusive. On the other hand, claims based on cryptography can be scientifically examined, and proved or disproved. In this book we examine the cryptographic evidence used to support the thesis that someone other than Shakespeare wrote the plays.⁶⁰⁰

The above statement is inaccurate, misleading and false. In addition to contemporary manuscripts/documents, textual, paratextual, style, subject-matter, content, parallels, correspondences and resemblances of which there are more than a thousand examples, the evidence for Bacon's authorship of the Shakespeare plays is overwhelming and irrefutable the vast majority of which is unknown to so-called Shakespeare authorities and experts, the general reader, and the rest of the world at large. The last part of their statement, as any professional cryptographer would know, is a blatant lie, i.e., claims, (meaning about literary ciphers) based on cryptography can be scientifically examined and proved or disproved. To demonstrate this falsehood we need do no more than quote Elizebeth S. Friedman herself from her unpublished manuscript written many years before the Friedmans decided to lie to the Shakespeare world in their printed book:

Literary ciphers may give you the swing of the thing, but they are in no sense scientific.⁶⁰¹

As the Friedmans were only all too perfectly aware sixteenth and seventeenth century literary codes and ciphers demand a wide and serious knowledge and understanding of the subject, combined with experience, common sense, and judgement, in order to critically evaluate them in context, upon their individual merits.

In the introduction the Friedmans present us with one of the fundamental reasons why the Stratfordian illusion has managed to survive for so long 'Anyone interested in English literature must know of the dispute, but few know anything of its history',⁶⁰² including the arrogant and deluded schoolmen who think they know, rather than understanding what little they think they know, has been carefully shaped and drip fed to them by the likes of Lee, Adams, Chambers, Schoenbaum, Wells, and Bate, etc.

With the prefatory matter and introduction concluded the Friedmans proceeded to give in their first chapter entitled 'The Great Controversy' a fraudulent account of the history of the Shakespeare controversy. As with the first page of the preface and first page of the introduction, the first page of the first chapter contains 33 printed lines of text: 33 Bacon in simple cipher, and similarly within its very large capital I there are 139 letters a double cipher for Francis Bacon(100)/F. Bacon(39). In keeping with their colleagues Dr Giles E. Dawson, Louis B. Wright and Dr James G. McManaway at the Folger Shakespeare Library the Friedmans begin their first chapter with a deliberately misleading and fraudulent statement:

It seems that the first man to question Shakespeare's sole authorship of the plays was a certain 'Captain' Goulding. In a small book called *An Essay against Too Much Reading*, published in 1728, he hinted at one of the anti-Stratfordian arguments.⁶⁰³

The poet and dramatist John Martson and satirist and moralist Joseph Hall revealed that Bacon, who they both personally knew and were acquainted with, was the author of the Shakespeare narrative poems *Venus and Adonis* and *The Rape of Lucrece* in a series of satires issued between 1597 and 1599. This is just one of numerous textual examples together with contemporary manuscripts, documents, printed works, as well as frontispieces, emblems and other cryptic devices many of which are included in the present work, that demolish the illusion the illiterate/semi-illiterate William Shakspeare was Shakespeare, as well as absolutely confirming he was a literary mask for Bacon.

CHAPTER I

THE GREAT CONTROVERSY

IT seems that the first man to question Shakespeare's sole authorship of the plays was a certain 'Captain' Goulding. In a small book called *An Essay against Too Much Reading*, published in 1728, he hinted at one of the anti-Stratfordian arguments. The plays, he said, are so superlative that 'Shakespear has frighten'd three parts of the World from attempting to write; and he was no Scholar, no Grammarian, no Historian, and in all probability cou'd not write *English*'. Goulding then introduces the first ghost:

Although his Plays were historical...the History Part was given him in concise and short, by one of those Chuckles that could give him nothing else...I will give you a short Account of Mr. *Shakespear's* Proceeding; and that I had from one of his intimate Acquaintance. His being imperfect in some Things, was owing to his not being a Scholar, which obliged him to have one of those chuckle-pated Historians for his particular Associate...and he maintain'd him, or he might have starv'd upon his History. And when he wanted anything in his Way...he sent to him...Then with his natural flowing Wit, he work'd it into all Shapes and Forms, as his beautiful Thoughts directed. The other put it into Grammar....

One may see here the germ of much future ingenuity; there is also a probable reference back to Jonson's remarks about Shakespeare's scholarship, Heminge and Condell's testimony to his facility, and Shakespeare's own comment on the poetic imagination ('The poet's pen, Turns them to shapes, and gives to airy nothing A local habitation and a name'). The trouble is that it is difficult to decide whether Goulding is in earnest; some scholars have declared the Essay to be an exercise in early eighteenth-century deflationary anti-heroics.

In 1769—some forty years later—there was published in England a curious little allegory with a historical framework, called *The Life and Adventures of Common Sense*. It is anonymous, but has been ascribed to one Herbert Lawrence. A copy of the

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Fig. 62 The deciphered first page of the first chapter of *The Shakespearean Ciphers Examined* revealing that Bacon is Shakespeare

If the reader had turned to the index of *The Shakespearean Ciphers Examined* in search of the names Joseph Hall and John Marston, he/she would have seen that they are not listed. This gives rise to the question did the Friedmans know of the series of tracts by Hall and Marston wherein they positively identify Bacon as the author of the Shakespeare poems? The answer to the question is found in both their book and typescript. The Hall and Marston evidence was brilliantly unearthed by Walter H. Begley in *Is It Shakespeare?* This work by Begley is referred to and cited from by the Friedmans in *The Shakespearean Ciphers Examined* confirming their awareness of the Hall and Marston evidence which they dishonestly suppressed.⁶⁰⁴ And if any more confirmation is required, in their prize-winning typescript locked away in the Folger Shakespeare Library, there are two statements not found in the book:

Theobald was indefatigable. His researches proved to him, at least, that in the *Satires* of Joseph Hall and Thomas Marston the word *labeo* was used to reveal the first claim of Baconian authorship, for the count of *labeo* equals 33, or Bacon in simple cipher.⁶⁰⁵

And again disparagingly:

Hall's *Virgidemiarum*...the volume wherein the Reverend Begley discovered strong evidence that the person whom Hall addresses as LABEO is Francis Bacon (Labeo=33, Bacon=33).⁶⁰⁶

Even this was a complete travesty. The evidence produced by Hall and Marston is extensive, complex and compelling in confirming Bacon's authorship of *Venus and Adonis* and *The Rape of Lucrece* which is why it was suppressed by Giles E. Dawson, Louis B. Wright and Dr James G. McManaway of the Folger Shakespeare Library and studiously suppressed by the Friedmans in their book *The Shakespearean Ciphers Examined*. In his pioneering account Begley devotes twenty detailed pages revealing and explaining the Hall and Marston identification of Bacon as the author of *Venus and Adonis* and *The Rape of Lucrece* only a few years after they were first published.⁶⁰⁷

The Shakespearean Ciphers Examined is predicated and subsequently proceeds on the basis of the Friedmans' stated premise:

not whether ciphers could have been used, but whether they were used.⁶⁰⁸

The answer whether ciphers, anagrams and various other cryptic devices were used in the Shakespeare works on which the *raison d'être* of their book rests, is not matter of opinion but a matter of hard fact one known to Bacon's early editors and biographers, which at a single devastating stroke completely demolishes their whole thesis.

From around 1616 onwards his first editor and biographer Dr William Rawley lived with Bacon for the last ten years of his recorded life. On his own account Dr Rawley was already chaplain and 'Amanuensis, or dayly instrument' to Bacon assisting him, as he tells us, 'in the composing, of his *Works*, for many years together; Especially, in his writing Time; I conceived, that no Man, could pretend a better Interest, or Claim, to the ordering of them, after his Death, then my self.'⁶⁰⁹ In 1623 Dr Rawley wrote the preface to *De Augmetis Scientiarum* published within weeks of the Shakespeare First Folio, the work containing Bacon's discussion on ciphers, namely, the simple cipher, wheel cipher, kay cipher, and the bi-literal cipher, which were used in the First Folio.⁶¹⁰ Dr Rawley was privy to Bacon's secret life and writings, including his authorship of the Shakespeare plays and intimately familiar with all his cipher systems.

In the months following Bacon's supposed death to the world his private secretary and Rosicrucian Brother Dr Rawley compiled and published a commemorative work in his honour *Memoriae honoratissimi Domini Francisci, Baronis de Verulamio, vice-comitis Sancti Albani sacrum*, otherwise known as the *Manes Verulamiani*, whose contents his orthodox biographers and editors have suppressed, which portray Bacon as a secret supreme poet and dramatist-writer of comedies and tragedies, under the pseudonym, Shakespeare. This rare volume contains thirty-two Latin verses in praise of Bacon and an introduction by Rawley (32+1=33 Bacon in simple cipher). As revealing as these remarkable verses already are, in his address to the reader, Dr Rawley, plainly states that he had deliberately withheld many and the best, meaning the most revealing, from public view:

What my Lord the right Honourable Viscount St. Alban valued most, that he should be dear to seats of learning and to men of letters, that (I believe) he has secured; since these tokens of love and memorials of sorrow prove how much his loss grieves their heart. And indeed with no stinted hand have the Muses bestowed on him this emblem (for very many poems, and the best too, I withhold from publication....W. Rawley.⁶¹¹

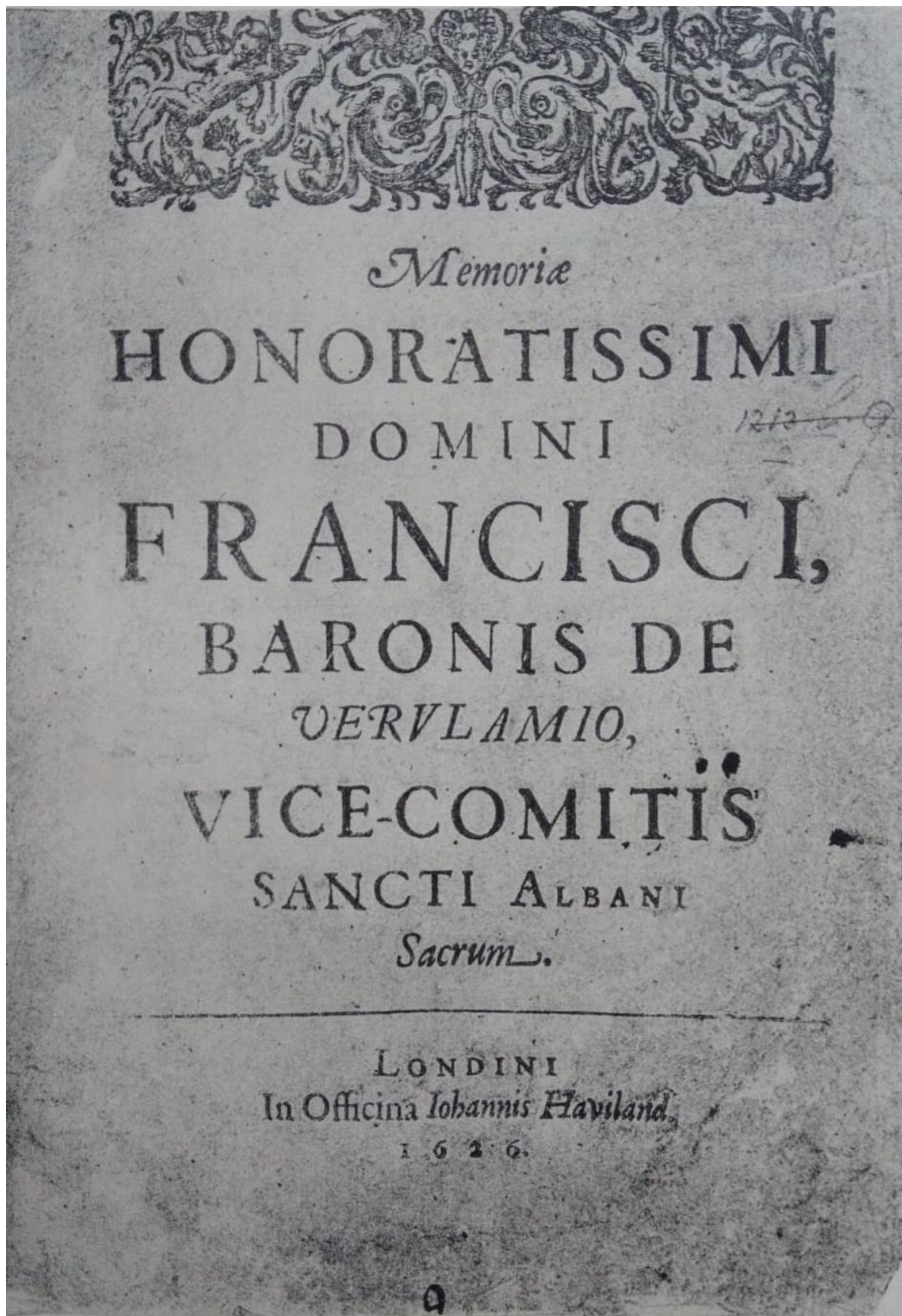
One of the verses in the *Memoriae* was written by the poet and dramatist Thomas Randolph one of Ben Jonson 'sons', who with his mentor also knew Bacon was the secret author of the Shakespeare works:

When he perceived that the arts were held by no roots, and like seed scattered on the surface of the soil were withering away, he taught the Pegasean arts to grow, as grew the spear of Quirinus [Spear/Spearman: i.e. Shakespeare] swiftly into a laurel tree. Therefore since he has taught the Heliconian goddesses to flourish no lapse of ages shall dim his glory. The ardour of his noble heart could bear no longer that you, divine Minerva [Pallas Athena the Shaker of the Spear who wore a helmet which rendered her invisible] should be despised. His godlike pen restored your wonted honour and as another Apollo [leader of the Nine Muses presiding over the different kinds of poetry and liberal arts] dispelled the clouds that hid you.⁶¹²

The verses to which Dr Rawley refers have never been found or revealed and we can only imagine the identity of their authors (most probably among them Ben Jonson and Sir Tobie Matthew) and the import of their contents relating to Bacon's authorship of the Shakespeare works. But what Dr Rawley could not say openly or in plain text he conveyed cryptographically on the title page of the *Memoriae*. On the title page there are 83 letters above the horizontal line and 5 words below it plus the addition of the date 1+6+2+6=15: 83+5+15=103 Shakespeare in simple cipher elegantly yielding the simple hidden message that Bacon is Shakespeare.

In addition to the *Memoriae* Dr Rawley continued to edit, translate and publish many editions of Bacon's works culminating in *Resuscitatio, or, Bringing into Public Light Several Pieces, of the Works, Civil, Historical, Philosophical, & Theological, Hitherto Sleeping* to which he prefixed the first English *Life* of Bacon. In his address to the reader Dr Rawley primes the initiated 'in regard, of the Distance, of the time, since his *Lordships* Dayes; whereby, I shall not tread too near, upon the *Heels* of *Truth*; Or of the Passages, and Persons; then concerned', for as he so succinctly puts it, there are some things that are not openly 'communicable to the Publick'.⁶¹³ Its title page and text is also replete with Baconian-Rosicrucian ciphers.

Following the death of Dr Rawley in 1667 the vast collection of Bacon's writings in his possession directly or via his son also named William Rawley passed to Thomas



Letters

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13

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$\frac{6}{83}$

Words

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Fig 63 The deciphered title page of the 1626 *Memoriae* revealing that Bacon is Shakespeare

Tenison (1636-1715), with secrets about Bacon's secret life and writings. In 1679 Tenison (afterwards Archbishop of Canterbury) published from these manuscripts the collection entitled *Baconiana* in which he says nothing is here offered 'as the *Labour* of that *Lord*, which was not written either by his own Hand, or in Copies transcrib'd by the most faithful Pen of his Domestic *Chaplain*, Dr *William Rawley*: A Person whom his Lordship us'd in his Life-Time, in Writing down, Transcribing, Digesting, and Publishing his Composures'.⁶¹⁴ Like Dr Rawley before him Tenison admits that 'Some few imperfect Papers, about his Lordships Affairs, or of very little moment in Philosophy, are still kept where they ought be, in private Hands.'⁶¹⁵ Some of Bacon's papers, letters and manuscripts still remain in private hands or the hands of his Rosicrucian-Freemasonic Brotherhood who carefully guard over his secret life and writings, including his hidden royal birth and the manuscripts of his Shakespeare poems and plays, both of which were known to Dr Tenison. In reference to the former Dr Tenison writes 'The great cause of his Suffering, is to some a secret. I leave them to find it out, by his words to King *James*, *I wish (said he) that as I am the first, so I may be last of Sacrifices in your Times*.'⁶¹⁶ Meaning that following the death of his royal mother Queen Elizabeth, as the heir to the throne, Bacon was the rightful King of England, and was thus the first sacrifice of the reign of the usurper King James. It was also the case, that like his Rosicrucian predecessor Dr Rawley, his second editor Dr Tenison was also familiar with Bacon's cipher systems discussed in the 1623 *De Augmentis Scientiarum* published within weeks of the Shakespeare First Folio:

The fairest, and most correct Edition of this Book in *Latine*, is that in Folio, printed at *London*, Anno 1623. And whosoever would understand the Lord *Bacon's* Cypher, let him consult that accurate Edition. For, in some other Editions which I have perused, the form of the Letters of the Alphabet, in which much of the *Mysterie* consisteth, is not observed: But the *Roman* and *Italic* shapes of them are confounded.⁶¹⁷

He was privy to the secret that Bacon wrote works anonymously and pseudonymously including his concealed authorship of the Shakespeare works:

And those who have true skill in the Works of the Lord *Veralum*, [Bacon] like great Masters in Painting, can tell by the *Design*, the *Strength*, the way of *Colouring*, whether he was the Author of this or the other Piece, though his Name be not to it.⁶¹⁸

If the statement by Bacon's second English editor Dr Tenison had been cited by the Friedmans it would of course have immediately ruled out the central premise of their work and ultimately collapsed it.

Were these absolutely vital pieces of evidence found in Dr Tenison's edition known to the Friedmans? If the reader had looked for the name Tenison in the index of *The Shakespearean Ciphers Examined* he/she might well have reasoned, that as his name does not appear on the index, the statements in question was not known to them. The answer to the question whether the Friedmans were honest brokers or blatant literary fraudsters, who duplicitously suppressed this evidence and information, is found on page 108 of their book:

Bacon's will might naturally be thought a promising text for exploration; and indeed, anti-Stratfordians have worked on a certain passage of it (which differs in different editions of the complete works; this is Tenison's version)...⁶¹⁹

Cognisant with the secret application of Bacon's key cipher Dr Tension doffs his hat to his authorship of the Shakespeare works in a simple, elegant, and ingenious way. On page 259 of his edition of *Baconiana* the numerical equivalent in key cipher for Shakespeare, it is so contrived that the first line on the page reads

That is, Francis Bacon.⁶²⁰

Before they begin to examine the various claims primarily made by Baconians the Fraudulent Friedmans set down the rules of engagement in the second chapter entitled 'Cryptology as a Science'. Before we proceed to examine their self-serving reasoning and arguments in the plain open text, consistent with the capital letters commencing the preface, introduction and chapter one, the second chapter also begins with a very large capital letter. Within the very large capital letter **T** which serves as a cryptogram wherein the Fraudulent Friedmans provide a disingenuous and misleading definition of the term cryptology there is a hidden secret message. Within the very large capital **T** there is a sum total of 133 letters which is a double cipher for Francis Bacon (100)/Bacon (33) and moreover it comprises 27 words and 130 roman letters (i.e., minus the three capital letters I, T, H): $130-27=103$ Shakespeare in simple and conversely $130+27=157$ Fra Rosicrosse in simple cipher. Thus providing the enciphered message that Francis Bacon, Brother of the Rosy Cross, is Shakespeare. The text on the whole page comprises a total of 33 lines: 33 Bacon in simple cipher.

With simply breath-taking arrogance and self-delusion the Fraudulent Friedmans on all matters of cryptology appoint themselves and only themselves as the law, the rule-makers, and judge and jury, in their own case. In doing so, they adopt a crude method of arguing in the kind of circles, that are both contradictory and self-refuting. In one place to be sure that a message is deciphered correctly the Friedmans state it 'must have its rules' and for another kind of cryptogram they state 'there are no rules'.⁶²¹ In another place the Fraudulent Friedmans insist the 'rules' must be applied 'precisely and inflexibly' whereas some systems 'the encipherer [and they might have added the decipherer] can exercise his judgement.'⁶²² Forgetting they are speaking about literary ciphers (or at least hoping their readers have) the Fraudulent Friedmans launch into the following inappropriate and misleading statements:

Getting a correct solution...is not a question of opinion, but a question of proof...he must in addition be able to show others that it is the right one,...[it] must be unbiased, systematic and logically sound; it must be free from appeals to insight, clear of guesswork, and should avoid imponderables like the plague; in a word, it must be scientific.

This is not perhaps often enough realised by layman, so it is worth drumming home. There is an art in devising ciphers, and an art in breaking them down. But in setting out his results, a cryptologist is above all a man of science. The validity of his solutions depends on the same kind of objective tests as other scientists use, and the steps in his reasoning are subject to the same criteria. He, like them, goes through the whole process of observation, hypothesis, deduction and induction, and confirmatory experiment. And in cryptanalysis, as in all science, there is the basic demand that if two suitably qualified investigators get to work independently on the same material they will reach identical results in the end. Just as there is only one valid solution to a scientific or mathematical problem, so there is only one valid solution to a cryptogram of more than a very few letters which involves the use of a real key; to find two quite different but equally valid solutions would be an absurdity.⁶²³

That is, *Francis Bacon*, Baron of *Vern-* * This is
a Transla-
tion of the
Publisher.
ham, Viscount of *St. Albans* : Or in more
conspicuous Titles;

The Light of the Sciences, the Law of Elo-
quence, late on this manner.

Who, after he had unfolded all the Myst-
ries of Natural and Civil Wisdom, ob-
eyed the Decree of Nature.

Let the *Companions* be parted ||, in the Year 1626, and the sixty sixth
of our Lord 1626, and the sixty sixth and Body.
year of his Age.

Thomas Meantys, a Reverencer of him
whilst Alive, and an Admirer of him
now Dead, hath set up this to the Me-
mory of so great a Man.

Fig. 64 The deciphered page 259 of Dr Tenison's *Baconiana* revealing and confirming that Bacon is Shakespeare

CHAPTER II

CRYPTOLOGY AS A SCIENCE

8 THE term 'cryptology' covers cryptography, the art of
 8 writing ciphers, and cryptanalysis, the science of solving
 11 them. A cipher is different from a code; we shall not
 27 discuss codes in this book, but since the word 'code' is often
 used by laymen (including some of the anti-Shakespeareans) in
 contexts where they clearly mean 'cipher', it is worth drawing
 the technical distinction between the two, so as to avoid
 confusion.

The difference is a simple one, and can be put quite briefly.
 In code systems, the units or symbols to be translated can be
 of different lengths: a letter, a syllable, a word, a sentence, or
 just a string of letters or numbers is agreed to stand for a
 particular word or a whole phrase in the message (for example,
 'A cat may look at a King' might be agreed to mean 'Oil shares
 steady', or 'JAZYN' to be the code sign for 'Come home—all
 is forgiven—Mother'). In contrast, the units in cipher systems
 are of uniform length and bear a uniform relationship to the
 units of the plain text. Usually one letter in the cipher corre-
 sponds to one letter in the message, though in some systems
 groups of two or even three letters are used in a cipher to stand
 for one letter in the message.

In this chapter we shall be discussing the conditions which
 any cipher has to satisfy if it is to count as a valid cryptogram.
 The principles of cryptology are based on common sense, but
 this is no guarantee that they will be observed; the most
 obvious things are often the easiest to overlook. So we had
 better begin at the beginning.

Ciphers are basically of two types: *transposition*, in which the
 letters of the original or plain-text message are rearranged; and
substitution, in which they are replaced by other letters, by
 numbers, or symbols. In transposition the letters retain their
 identities but their relative positions are changed; in substitu-
 tion the letters retain their relative positions but their identities

40 3
 49
 41
 130

Fig 65 The deciphered first page of the second chapter of *The Shakespearean Ciphers Examined* revealing that Bacon, Brother of the Rosy Cross, is Shakespeare

The basic principles of cryptology are based upon ‘common sense’, well maybe, but where does common sense rest in relation to the stated ‘certainties’ of science and mathematics. They must adhere to the rules of grammar and logic, but as every young schoolboy knows the ‘rules’ of grammar are interpretative, and as for the ‘rules’ of ‘logic’, whose rules of logic? Who is it that decides and determines them? Well, of course, the Fraudulent Friedmans, who else. Their impressive conveyance of certainty by language and association reinforced by drawing on the perceived certainty of science (it is now generally acknowledged science like any other form of knowledge is provisional) and the mathematical theory of probability (which itself in relation to cryptology is dependent upon the extent and quality of the data available) would no doubt be the desired objective of all cryptologic investigations. The rules and maxims laid down by the Fraudulent Friedmans would certainly act as point of departure for certain ciphers and codes, for example, military and machine ciphers, and provide a reasonably certain method with which to demonstrate their decipherment, but we are not talking about military or machine ciphers, but ciphers in literary texts from the sixteenth and seventeenth century. Yet this conveyance of certainty begins to find its very own seeds of refutation in their very next paragraph which marks the beginning of a series of qualifications and exceptions throughout the chapter in addition to those scattered throughout the book.

Precisely, how many letters are required before we can be sure there will be only one solution? On this point, as neither of the Friedmans were trained mathematicians they refer to Claude Shannon’s paper ‘Communication Theory of Secrecy Systems’ in which he states ‘(in a system where one letter in cipher corresponds to one letter in text and only one alphabet is involved) if a cryptogram has only about fifteen letters or less, there will be more than one solution; if it has about fifty letters or more, only one solution can possibly be obtained.’⁶²⁴ Now, state the Friedmans, ‘this result is a purely mathematical one, and practical experience does not altogether agree with it: the estimate that fifty letters are needed before a solution can be trustworthy seems to us rather high.’⁶²⁵ In a more recent paper however the Friedmans point out Shannon ‘has revised his calculations and reached a different answer. In the case of ordinary English, he now puts the minimum length at twenty-five letters; our own experience suggest this about right’, before adding ‘Of course, this is not a hard and fast rule.’⁶²⁶ So on the one hand when it suits we are able to disregard a purely mathematical solution when it fails to correspond with their ‘practical experience’. Nowhere do the Friedmans make plain whether or not practical experience is a branch of mathematics, probable or otherwise, or alternatively a discipline of one of the sciences.

In these examples of amendment, revision and the continual shifting of criteria, the Fraudulent Friedmans confound and undermine their own arbitrarily applied scientific and mathematical principles. In other words they employ a method of argument that begins with statements of certainty, followed by clause and qualification, which is then turned into positive advantage for their own subverted self-serving purposes.

Earlier the Fraudulent Friedmans made the assertion ‘to find two quite different but equally valid solutions would be an absurdity.’ In reintroducing the point they open up by saying ‘We remarked earlier that two cryptanalysts working independently should always be able to reach identical answers’⁶²⁷ and the ‘most important thing to remember is that for a solution to be valid it must be possible to show that it is the only solution.’⁶²⁸ In keeping with their well-established pattern of initially making a certain sounding statement there follows the usual qualifications and exceptions ‘in practice, one has to make allowances for a few mistakes here and there; and certainly, occasional errors may lead to *minor* differences in the solutions offered by different

cryptanalysts working independently (though where a correction or insertion may make a difference to the meaning of a plain text it is usual to show the various possible alternatives). But the validity of the rest of the text is not affected by a few doubtful letters.’⁶²⁹ It is self-evident that throughout the chapter ‘Cryptology As A Science’ the Friedmans were content to reason in circles and the statements, examples and arguments arbitrarily employed, possessed the distinguishing and unmistakable quality of being self-refuting-emphatically demonstrated by the following example:

How many letters are there in a ‘few’? Would a solution be considered invalid if ten per cent of the letters were doubtful? Or twenty per cent? or twenty-five per cent? Again, there can be no hard and fast rule. Obviously, as we get near fifty per cent, the business becomes more and more implausible. But there are cases in which quite convincing solutions have been offered with as many as half the cipher letters missing. As a rule, these involve ciphers in which a pair of letters or more in the cipher stand for each plain-text letter. In the case of Bacon’s biliteral cipher, which we shall come to later, each letter in the plain text is represented by five characters in the cipher, and here it is sometimes possible to find a plausible solution even if a large number of the cipher elements are missing or doubtful or erroneous. However, in ciphers where one letter in the cipher represents one in the text, the situation is different. Each case must be treated on its merits, but in practice the allowable error is seldom more than five to ten per cent at the outside. Very occasionally it may be higher; but then the solution can only be taken as valid if the errors can be shown to be systematic in some way, or if their presence can be explained objectively.⁶³⁰

In their book *The Shakespearean Ciphers Examined*, most likely the only work on ciphers by the Friedmans, ever read or dipped into by the reading public, despite the qualifications and contradictions, the reader is left with the strong lasting impression deciphering is a mathematical science. The impression carefully created in the mind stems from the headline title of the chapter entitled ‘Cryptology as a Science’. No matter the Fraudulent Friedmans continually undermined and contradicted their own premises of certainty at every turn and resorted to insinuating series upon series of qualifications, making statements in one place only to negate them in another. The underlying message remained: cryptology was a mathematical science and for the results of the decipherer to be valid they needed to be independently corroborated and confirmed before they could be accepted as valid. The true purpose of their book issued for the doubting scholars and the consumption of the masses, some of whom had started to believe or had heard Shakspeare was not the real author of Shakespeare, and there were secret ciphers which revealed Bacon was the true Shakespeare, was not to fairly assess whether there are ciphers present in the Shakespeare poems and plays. Rather it was their task to once and for all dispel the notion and emphatically dismiss it.

It was therefore important that the reader believed the methods and principles of the decipherer were certain or at least tolerably certain. The success and effectiveness of conveying this impression of certainty can be measured by the simple fact their book was accepted as being a reasonable, fair and critical assessment of the Shakespeare ciphers, all impartially delivered by the great cryptanalysts, the Friedmans, meaning the whole subject had been put to rest and was no longer open to doubt or question.

The methods and principles of decipherment as presented in their book did not allow of it. This was a book written by the world’s greatest cryptologists approached in a disinterested and objective manner with the absolute utmost integrity and honesty. Or so it was believed.

Based upon these certain principles when the Friedmans concluded that all the various ciphers claimed for by Baconians were not present in the Shakespeare works, then the world could be certain they were not there. But this was simply not the case and as we have seen it most certainly was not a critical and honest assessment. The real question was never going to be whether there truly are Baconian ciphers present in the Shakespeare works, it was whether the Friedmans said there were ciphers present in the Shakespeare works. And it needed to be framed in such a way that it was believed their findings were based upon sure methods and acceptably certain rules of decipherment and thus settling the matter once and for all. Confident their findings would be accepted by the world at large and certain they would be endorsed by highly placed opinion formers the Friedmans presented a false, distorted and self-serving explanation of the methods and principles of decipherment in order to achieve their preconceived or predetermined ends. Equally they were also right to be confident that no one would take the time and trouble to closely and minutely compare hundreds of pages of an unpublished typescript fortuitously tucked away in the Folger Shakespeare Library with its published equivalent, to check for important contradictions and omissions.

The Fraudulent Friedmans were also rightly confident that virtually all their readers would not be familiar with the introduction written by William F. Friedman in the not so easily obtained edition of *An Introduction to Methods for the Solution of Ciphers* written and originally published during their time at Riverbank where he DID give an accurate and honest account and analysis of the principles of deciphering; which was not initially at its date of publication available to the general public.

In fact the introduction to *An Introduction to Methods for the Solution of Ciphers* is arguably the most concise explication and summary of the principles underlying the process of decipherment ever written which completely confutes and demolishes their central thesis and the lies and falsehoods peddled to the world in their fraudulent *The Shakespearean Ciphers Examined*.

As they both knew there are no hard and fast rules in the process of decipherment, no mathematical certainties, no incontrovertible scientific methods and principles, and as for some kinds of ciphers the Friedmans were also perfectly aware that no two decipherers would in every single instance independently arrive at exactly the same decipherment:

AN INTRODUCTION TO METHODS FOR THE SOLUTION OF CIPHERS

ON THE FLEXIBILITY OF MIND NECESSARY IN CIPHER WORK

Deciphering is both a science and an art. It is science because certain definite laws and principles have been established which pertain to it; it is also an art because of the large part played in it by imagination, skill, and experience. Yet it may be said that in no other science are the rules and principles so little followed and so often broken; and in no other art is the part played by reasoning and logic so great. In no other science, not even excepting the science of language itself, grammar, does that statement, "The exception proves the rule," apply so aptly. Indeed it may be said, and still be within the limits of the truth, that in deciphering, "The rule is the exception."

The reason for this is not hard to see. If one is dealing with a problem in physics, for example, a problem dealing with the temperature, pressure, and volume of gas, the solution of the problem may be attained directly and with almost absolute accuracy, because the underlying laws are invariable and unchanging in their application. Because of this, the problem resolves itself into a problem in mathematics. From the very nature of mathematics,

the results are absolutely predetermined. The data having been given, the solution is reached by a series of definite and unerring steps, subject to no modification whatever, because the results, being dependent upon nothing but the data, are fixed from the start. Each step follows inevitably from the preceding. No imagination is at all necessary; no assumptions need be made, which may prove to be untenable and therefore must be rejected and replaced by others.

Contrast this situation, on the other hand, with that which confronts the decipherer at the very beginning of his attempts to solve a problem. Many times the cipher carries with it not even so much as an indication of the particular language in which it is written. Granted, however, that he knows the language, the foundations of any language are so unstable, so variable, and so uncertain, that no absolutely fixed laws can be made to hold. This does not refer to the innumerable variations in inflection, conjugation, etc., with which every language has to contend, but refers particularly to the very roots from which a language springs-the elementary sounds, the elementary syllables, and the words, phrases, and sentences. There is no rule, and there can be no rule, to determine the sequence of sounds-there can be no law which says that sound "ay," for example, must always be followed by sound "em," or any other sound. There can be no rule which determines how many letters shall compose a syllable, how many syllables shall constitute a word; nor what words shall follow any given word. Indeed, the characteristics which distinguish a good writer or speaker from a poor one, are exactly those which are concerned with the flexibility with which the former employs and manipulates the words, phrases, and sentences. A single idea may be expressed in a multiplicity of ways, all differing markedly from each other. Furthermore, the nature of the text as a whole varies. For example, scientific text differs materially from literary text or military text.

All such conditions affect the raw material with which the decipherer must work-the letters themselves. Therefore, only the most generalized rules can ever apply to deciphering operations; and there can only be a few guiding principles, which the decipherer should always be ready to modify...It is the facility and ease with which a decipherer is able to modify his methods and discard his assumptions, which differentiates the good decipherer from the poor one. ***Deciphering is not a process for a "one-cylinder mind."***

Likewise the part played by imagination and intuition can hardly be overestimated. The knowledge of the circumstances surrounding the interception of a message, of the correspondents etc., furnishes a wide field for the exercise of the intuitive powers; and a shrewd "guess" will often result in more progress than a whole day's painstaking labor. This faculty, so essential in deciphering, can be developed and trained. The exercise of the imaginative powers by attempting to assume whole words, given only two or three letters and their positions, will result in the stimulation of all the faculties concerned in the expression of ideas, will thus enlarge the decipherer's vocabulary, and otherwise arouse those qualities of mind which are peculiarly needed in cipher work.

Persistency is absolutely necessary for deciphering. Results are often secured only after seemingly endless experiment, and concentrated effort. It may be said that even after one has a thorough grasp of the underlying principles, patience and perseverance are the key-notes to success....

To summarize then, the qualities upon which success depends in deciphering are interrelated-reasoning from laws must be balanced with facility in modifying those laws; imagination must go hand in hand with discretion; and intuition can never wholly take the place of concentration and perseverance. ***Finally, let it not be forgotten that many times the greatest ally the mind has is that indefinable, intangible something, which we would forever pursue if could - luck.***⁶³¹

In augmenting the wealth of miscellaneous evidence which in itself serves to reveal Bacon's authorship of Shakespeare the present work has principally employed two ciphers, the simple cipher and kay cipher, as an independent method of confirmation. Both of these cipher systems are addressed in the Friedman's Folger typescript under

the title ‘Numerical cipher “Seals;” Rosicrucian emblems; Baconian numerology.’ and in their printed work under the curiously vaguer shorter title ‘Odd Numbers’. In keeping with the previous cryptographic pattern the first page in this chapter in the book is not without interest. Within the very large capital letter **T** there are 31 words, 135 roman letters, and 2 capital letters (‘HE’). $135-2=133$ a double cipher for Francis Bacon (100)/Bacon (33) in simple cipher. The 135 letters minus the 31 words equals 104 which minus the large capital T: $104-1=103$ Shakespeare in simple cipher. On the whole page there are 33 lines of printed text: 33 Bacon in simple cipher. The chapter is given in roman numerals ‘XII’ and it falls on page 169: $169-12=157$ Fra Rosicrosse in simple cipher thus the concealed cryptogram yields hidden message Francis Bacon, Brother of the Rosy Cross, is Shakespeare.

The Friedmans set out by describing the simple and kay cipher. In the simple cipher each of the 24 letters in the Elizabethan alphabet are assigned a number: A=1 through to Z=24:

SIMPLE CIPHER

A	B	C	D	E	F	G	H	I-J	K	L	M	N	O	P	Q	R	S	T	U-V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

To find the numerical value of a name one simply adds the individual value of its letters. For example,

B	A	C	O	N
2	1	3	14	13

which gives Bacon the numerical value of 33 in simple cipher, and

S	H	A	K	E	S	P	E	A	R	E
18	8	1	10	5	18	15	5	1	17	5

gives the numerical value of 103 in simple cipher.

KAY CIPHER

A	B	C	D	E	F	G	H	I-J	K	L	M	N	O	P	Q	R	S	T	U-V	W	X	Y	Z
27	28	29	30	31	32	33	34	35	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Thus again for example,

B	A	C	O	N
27	28	29	14	13

gives the numerical value of 111 in kay cipher, and

S	H	A	K	E	S	P	E	A	R	E
18	34	27	10	31	18	15	31	27	17	31

gives the numerical example of 259 in kay cipher.

These two systems lay undiscovered for nearly three hundred years. The simple cipher was first discovered by Baconian enthusiasts just after the turn of the twentieth century with the kay cipher unearthed sometime prior to 1916. The Friedmans point out the foremost exponent of these systems was Frank Woodward, one time President

CHAPTER XII

ODD NUMBERS

8
11
12
—
31

THE word 'numerology' is of comparatively recent origin; it began to find its way into dictionaries only about thirty years ago, and is still not listed in some of the more exclusive ones. But the activity the word covers—the assignment of numerical values to letters, and the investment of these numbers with magical powers—dates back to the early Egyptians and the Babylonians. The Talmudic Jews were familiar with it; and during the whole Christian era people have puzzled about the meaning of certain numbers mentioned in the Scriptures (a popular enigma is presented by Rev. xiii. 11 to 18, where the mystical 666 is cited as 'the number of the beast'). More generally, philosophy, astrology, alchemy, and mathematics were all influenced in their early stages by the speculations of the numerologists. Plato's writings suggest that he was interested in the subject; Pythagoras and his followers devoted a good deal of their attention to it;¹ and many other great thinkers were at one time or another ardent believers in the miraculous properties of numbers.

43
50
42
135

3

Baconian cryptologists have often shown an interest in Secret Societies, cabals, and occultism; it was perhaps inevitable that they should finally turn to numerology. The search for 'seals', or hidden numerical ciphers, began in the early years of this century and since that time has continued to be enormously popular.

The basic cipher sequences used in Baconian numerology are given by assigning numbers to the 24-letter Elizabethan alphabet in a straightforward way, A being equivalent to 1 and Z to 24, or in reverse, with Z as 1 and A as 24. In other words, the sequences are:

¹ Eric Bell, in his book on *Numerology* (Baltimore, 1933), says of Pythagoras that, having made a brilliant discovery of the Law of Musical Intervals, 'he proceeded to indulge in an orgy of mathematical speculations...got numerologically drunk, and died scientifically of intellectual delirium tremens'.

Fig 66 The deciphered first page of chapter XII of *The Shakespearean Ciphers Examined* revealing that Bacon, Brother of the Rosy Cross, is Shakespeare

of the Baconian Society, who with his brother Parker Woodward, was responsible for a large number of books and pamphlets on Bacon's authorship of the Shakespeare plays. In particular the brothers Frank and Parker Woodward were responsible for the privately circulated and anonymously issued *Secret Shakespearean Seals Revelations of Rosicrucian Arcana. Discoveries in the Shakespeare Plays, Sonnets, and Works, Printed Circa 1586-1740, Of "Secreti Sigilli," Concealed Author's Marks and Signs* (1916) and seven years later *Francis Bacon's Cipher Signatures* (1923). These works the Friedmans state contain:

the details of the Rosicrucian group of sixty or seventy men, led by Francis Bacon, who controlled the printing of all the books issued in Elizabeth's time and onwards into the eighteenth century. Their authorship was anonymous, and their pseudonyms diverse and frequently changed; their secret numerical signatures gave the only clue to their creativity. The secrets of the order were passed on from generation to generation within the group; and, according to the brothers Woodward, they survive to this day.⁶³²

Instead of arguing in self-refuting circles here the Fraudulent Friedmans address the discoveries presented by the Woodwards by adopting a mocking and sarcastic tone. In *Francis Bacon's Cipher Signatures* Woodward points out that in the very carefully formatted left-hand column of *I Henry IV* on page 56 (Fr. Bacon in simple cipher) of the 1623 Shakespeare First Folio the name Francis is mentioned 33 times: 33 Bacon in simple cipher.⁶³³ Instead of pointing out to their anaesthetised readers that if this was deliberately formatted under Bacon's direction as it went through the Jaggard family press it provided a strong presumption he was the author of the Shakespeare works,⁶³⁴ the Fraudulent Friedmans sarcastically pass over it.⁶³⁵ Their readers would no doubt have benefited from knowing that from 1606 John Jaggard published a series of editions of Bacon's *Essays*, one of which was printed by his brother William Jaggard that contain Baconian-Rosicrucian ciphers and various other cryptic devices. The Shakespeare First Folio was printed and published by William and Isaac Jaggard in November 1623 and soon after Elizabeth Jaggard (John's wife) reprinted Bacon's *Essays* in 1624. At the time of Bacon's recorded death the Jaggards owned the copyright to his *Essays* and partly owned the copyright to his Shakespeare First Folio.

In the 1916 volume the Woodwards introduced the discovery of the kay cipher, which is attributed to one of their Baconian colleagues William E. Clifton.⁶³⁶ In *The Advancement of Learning* Bacon observes that 'The kindes of CYPHARS, (besides the SIMPLE CYPHARS with Changes, and intermixtures of NVLLES, and NONSIGNIFICANTS) are many, according to the Nature or Rule of the infoulding: WHEELLE-CYPHARS, KAY-CYPHARS, DOVBLES, &c.,'.⁶³⁷ The Kay cipher is presented by Woodward as follows.

KAY CIPHER

A	B	C	D	E	F	G	H	I-J	K	L	M	N	O	P	Q	R	S	T	U-V	W	X	Y	Z
27	28	29	30	31	32	33	34	35	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

The Fraudulent Friedmans immediately set about trying to undermine and discredit the Kay cipher system with a series of misleading, false, and fraudulent statements that I here quote in full:

In the same volume Woodward introduces a new cipher system, the discovery of which he attributes to another Baconian, William Clifton. In the 1605 edition of *The Advancement of Learning*, Bacon remarks that 'the kinds of cyphars...are many...Wheeley-cyphars, Kay-

cyphars, Doubles, etc.’ And now, according to Woodward, the ‘kay cipher has been brought to light.

The value of the letters, from K onwards, are the same as those in the simple cipher; and hence the name. Woodward does not explain why A does not have the value 25, following Z as 24, as one might expect. The only reason that has so far been offered is that the value 25 is assigned to ‘&’, and 26 to another letter ‘E’ (probably the alternative form, &, of the ampersand). But in fact there is no need to explain this kind of eccentricity: in legitimate cryptography the man who devises a system can assign any value he likes to any letter he chooses, provided that, once this is done, those who work with the system keep strictly to the rules. And in this particular system the numbering has the advantage of fitting in neatly with Woodward’s own preconceptions, so we can hardly expect him to quibble.

There is, unfortunately, an erroneous assumption at the basis of the ‘kay cyphar’: the Baconians concluded that in using the term ‘kay ciphers’ Bacon had meant that the numbering of the alphabet should begin with the letter K. It is at once obvious to anyone who knows anything about cryptography that Bacon meant nothing of the kind: he was referring to key-ciphers, which are systems using several different alphabets, each being identified by a key-word or key-number. This is suggested by Bacon’s spelling of the word ‘cyphar’, where he uses an ‘a’ for an ‘e’ five times in the same passage; it ought to have occurred to Woodward that the ‘a’ of ‘kay’ might similarly be understood as an ‘e’. The interpretation is confirmed by the enlarged Latin edition of *The Advancement of Learning* in 1623, where in the corresponding passage Bacon uses the expression ‘Ciphrae Claves’ (*clavis* being the Latin for key).⁶³⁸

In unfolding their misleading arguments and observations the Fraudulent Friedmans failed to draw to the attention of their learned readers the first English translation of *De Augmentis Augmentis* by Gilbert Wats published in 1640 and the second edition of the same published in 1674. In the 1640 translation which appeared under the title *Of the Advancement and Proficiency of Learning or the Partitions of Sciences IX Bookes Written in Latin by the Most Illustrious & Famous Lord Bacon* the relevant passage appears as follows:

*Wherefore let us come to CYPHARS. Their kinds are many, as Cyphars simple; Cyphars intermixt with Nulloses, or non-significant Characters; Cyphers of double Letters under one Character; Wheele-Cyphars; Kay-Cyphars; Cyphars of words; Others...though the Cypher it selfe bee sure and impossible to be decypher’d, yet the matter is liable to examination and question; unlesse the Cypher be such, as may be voide of all suspicion, or may elude all examination.*⁶³⁹

It will be seen that the word cipher is written as ‘Cyphar’ with an ‘a’ and ‘Cypher’ with an ‘e’ and as with the original 1605 edition of *The Advancement of Learning* the Kay cipher is printed ‘Kay-Cyphars’, not Key-Ciphers.

In the second edition of Wats’ version of the *De Augmentis Scientiarum* the spelling differs from the 1640 edition:

*Wherefore let us come to Cyphers. Their kinds are many, as Cyphers simple; Cyphers intermixt with Nulloses, or non-significant Characters; Cyphers of double Letters under one Character; Wheel-Cyphers; Kay-Cyphers; Cyphers of words; Others...*⁶⁴⁰

In the second 1674 edition, on each and every occasion, the word cipher is spelt with an ‘e’ and like the original 1605 edition of *The Advancement of Learning* and the first 1640 translation of the *De Augmentis Scientiarum*, the Kay cipher is printed ‘Kay-Cyphers’, not Key-Ciphers.

In their book the Fraudulent Friedmans state that Woodward does not explain why A does not have the value of 25 following Z=24-the only reason offered so far is the value of 25 is assigned to & and 26 to another letter E probably the alternative form of the ampersand. Thus virtually all readers of their book would not have the slightest idea that in the 1916 work *Secret Shakespearean Seals Revelations of Rosicrucian Arcana Discoveries in the Shakespeare Plays, Sonnets, and Works Printed Circa 1586-1740, Of "Secreti Sigilli," Concealed Author's Marks and Signs* and the later 1623 volume by Frank Woodward *Francis Bacon's Cipher Signature* that Clifton's grounds for assigning the numerical values of the kay cipher are put in full before the reader.

In their Folger Shakespeare Library prize-winning typescript the Friedmans structure and set out their contention of this point in a different manner to the book version. In the critical importance of accuracy it is necessary to precisely relate their method and approach. In their unpublished typescript the Friedmans start by citing a passage from *Francis Bacon's Ciphers Signatures*:

It is to a Baconian friend, Mr. W. E. Clifton, that we owe the discovery of the 'Kay' Cipher. Studying the letters and figures of the 'Simple' Cipher, he noticed that letter 'K' was the first letter requiring two figures (10), as its numerical equivalent. He saw the difficulty of using such a cipher for continuous figures, as some letters would require one figure, and others two, to express them; for instance:-

1223 might mean A B B C or 12.23 meaning MY.

He thought it almost certain, that double numbers would be used for the first nine letters of the Alphabet, 'K' being the tenth. The difficulty was to find out, what figure was used for letter 'A'. Research, and the lucky chance, of having certain old books in his possession, gave him the answer.⁶⁴¹

The Friedmans then proceed to state:

Note that the numerical values for the letters K through Z are the same in the Simple and the Kay alphabets; and that in the latter, although Z equals 24, the expected numeral [sic] value for A, that is 25, does not appear, but A is given the value of 27. This ellipsis cannot be explained by the omission of the letter V, because even if it were included in a silent count, A would have the value of 26, not 27. Aside from Clifton's own explanation, of this circumstance, too absurd to warrant consideration, we have seen only one silently offered explanation by some of the proponents of this method: After the letter Z (= 24), they add the ampersand (=25), and another letter E (=26), standing presumably for "etcetera." In actuality, however, no explanation is obligatory for such a feature in the field of legitimate cryptography: it is entirely permissible cryptographically for the originator to assign any values he pleases to an alphabet-provided he sticks to his own rules without deviation, or to the rules of sound cryptographic practice. In this case, however, the jump from Z=24 to A=27 is worthy of note, because the whole structure of the "Kay Cipher" is based on an erroneous assumption-namely, the Baconians' conclusion that, in enumerating the various kinds of ciphers, Francis Bacon's use of the term "kay ciphers" meant that one should begin numbering the letters of the cipher alphabet with the letter "K". For any one at all conversant with the terminology of cryptography recognizes at once that Bacon had reference to Key-ciphers; that is, to cipher methods which employ several different alphabets, the latter being used in sequence or in accordance with a key, which may consist of a key-word or a key-number. Bacon makes this completely unmistakable when in the enlarged Latin edition (1623) of his treatise he uses the expression "Ciphrae Claves" (key ciphers), where in the English (1605) edition he uses "kay cyphars". Moreover, in the self-same passage of the 1605

work, Bacon's orthography sets down an A for an E five times in the word "Cyphars", hence it seems strange that it did not occur to Clifton, Woodward, and other Baconians that the A or "kay" might not likewise be understood as an E. But the "Kay cipher" or "Kaye Cypher" was launched and became a standard prop, and with it the mystic number 287.⁶⁴²

On the basis of the above contracted quotation taken from Frank Woodward's 1923 *Secret Shakespearean Seals Revelations of Rosicrucian Arcana Discoveries in the Shakespeare Plays, Sonnets, and Works, Printed Circa 1586-1740, Of "Secreti Sigilli," Concealed Author's Marks and Signs* and the duplicitous suppression of the supporting evidence and arguments, anyone reading the Folger typescript version, in knowing no better would naturally assume the Fraudulent Friedmans had reproduced Clifton's evidence and arguments in full.

Firstly, the explanation the Woodwards provided in *Secret Shakespearean Seals*:

[The kaye cipher] takes its name from the fact that in the alphabet of that period the letter K was the tenth letter and accordingly the first letter, which was by its position represented by two figures (10). . . It will be noticed that the letter A ought correctly to have been number 25 and B 26. But as this method was a secret one, early discovery was avoided by slipping two numbers and giving A the figure value of 27.

The enumeration adopted in *The Repertoire of Records*, 1631 (see hereafter), formed the most valuable clue to the discovery of the Kaye method.

In the 1670-71 edition of the *Resuscitatio*, a further clue was obtained. A few words upon one of the early subject pages of the *Resuscitatio* were found to have been carefully covered over with a strip of paper. Held to the light, it disclosed an apparently innocent message about a Dr. A. and a section 27.

Experiment with a number of prominent names of the period convinced the group of us who took part in it that we had arrived at a correct solution. Pondering over the Red Cross Knight of the *Faerie Queene* and the references to the secret Fraternity of the Rosy Cross in the *Anatomy of Melancholy*, 1621 and in Ben Jonson's Masques of *The Fortunate Isles* and *News From the New World*, we concluded that the 287 Seal placed in position of prominence by so many important writers of books probably referred to membership of that secret society.

We found that counting by the Kaye method the words "Fra Rosicrosse" or "Fra Rosiecross," totalled 287.

F r a R o s i c r o s s e
32 17 27 17 14 18 35 29 17 14 18 1 8 31 = 287.⁶⁴³

From *Francis Bacon's Secret Signatures* there follows below the full arguments and evidence cited by Clifton for the assigning of the numerical values for the kay cipher:

It is to a Baconian friend, Mr. W. E. Clifton, that we owe the discovery of the "Kay" Cipher. Studying the letters and figures of the "Simple" Cipher, he noticed that letter "K" was the first letter requiring two figures (10), as its numerical equivalent. He saw the difficulty of using such a Cipher for continuous figures, as some letters would require one figure, and others two, to express them; for instance:-

1223 might mean - A,B,B,C. or 12, 23 meaning- MY.

He thought it almost certain, that double numbers would be used for the first nine letters of the Alphabet, "K" being the tenth. The difficulty was to find out, what figure was used for letter "A." Research, and the lucky chance, of having certain old books in his possession, gave him the answer.

The first of these books was:-

THE REPERTORIE OF RECORDS, 1631.

This is a strange and rare book. It is anonymous, and is dedicated “To the unknowne Patron.” It has been assigned to the authorship of T. Powell.

Mr. Clifton’s attention was attracted, by the special mention in this book, on Page 31, of two places closely associated with Francis Bacon.

“a box contayning a booke of the enormities of Cardinall Woolsey and his surrender of *Yorke House*, and *Saint Albans*, with other lands.”

On page 33, commences a curious lettering of the chests, in which records had been placed. These chests, it says, were placed in the third Treasurie, being the old Chapter House of the Abbey of Westminster, &c.

The first two chests are marked, respectively, A and B. The list continues on page 85, with “C,” and the enumeration proceeds to “Z,” which is said to indicate the 24th chest. The 25th chest is marked “&” and the 26th with “E.”

Curiously, the 27th chest is marked with a small “a” and then the alphabet is followed again. This marking suggested to Mr. Clifton, that here was a direction for the Kay Cipher, and that letter “A” was to be number 27.

The other book, which helped in the solution of this Cipher, and confirmed the above was:-

RESUSCITATIO.

Or, bringing into Publick Light several Pieces of the Works, of Francis Bacon, &c.

It is by William Rawley, his Lordships First and Last Chaplain, and was published in 1671. Rawley died in 1667. This was the third edition.

On page 17 of this work was a foot-note, carefully covered over with a strip of paper. This strip, I have loosened and turned back, before making the facsimile: to enable it to be read. It states:-

“The Reader is desired to take notice of a Letter to Doctor A., that should not have been printed, &c.”

But no letter to a Doctor A. had been printed, and therefore the foot-note was unnecessary. Then it goes on:-

“The true Copy, Corrected by Dr. Rawley cometh in the twenty seventh Folio following &c.”

But it does *not*; neither statements are correct. Why was the footnote put there, if unnecessary, and the strip put over it? Possibly it was an intelligent anticipation of what happened. Mr. Clifton held it up to the light, and again found a suggestion that “A” was “27.” On this he acted, and completed what is called the “Kay” Cipher.

These are the two Ciphers, [i.e. simple and kay] upon which the later discoveries are based. Next, the method of their use must be explained, for Bacon did not employ the method of Selenus, nor did he simply transpose Letters into Numbers, or Numbers into Letters.

Bacon, as far as is known at present, used these two Ciphers for signatures only, and his method of use, was so subtle and yet so simple, that its presence has not been suspected. Instead of turning the Letters of a name into figures, as for instance:-

BACON into 2, 1, 3, 14, 13, he took the *sum* of these numbers, to represent his name:-

B- 2
A- 1
C- 3
O- 14
N- 13

“33” then represents “Bacon.” Baconians have known this for a long time, and knew that this number was arrived at in the manner shewn; the figure values being taken from those of the “Simple” Cipher.

It may be asked how they knew this?: It is because several books, in the production of which, it is thought Bacon had some share: have this page 33, marked in some special manner; or sometimes it contains special information, to which attention is directed; in other words, 33 is a marked page. It will be remembered for instance, that the enumeration of the chests in “The Repertorie of Records” commenced on page 33. Here is another example:-

MINERVA BRITANNIA.

This book was published in 1612, as by Henry Peacham. It contains a series of Devices or Emblems, each with a dedication to some noble or distinguished person, with verses attached. . .[page] 33 is marked with a heavy dot.

This example is especially significant, as the Emblem on page 33, is a covert suggestion of Shakespeare, and it must be remembered that 33 means “Bacon”.

The Emblem, is a hand shaking a spear, and the one on the opposite page, is dedicated to “The most judicious and learned, Sir Francis Bacon, Knight.”⁶⁴⁴

It is patently obvious the extremely unusual (as far as I am aware unprecedented) device of instructing the printer to place a strip of paper over the footnote was carried out with the clear deliberate intention of drawing attention to it and the concurrence of the letter A in relation to the number 27 vis-a-vis the kay cipher. As well as being known and employed by those responsible for the very early editions of Bacon’s works it appear that the kay cipher was also known to the Bishop of Bristol. Bacon’s biographer Alfred Dodd, himself a Freemason, possessed a copy of Archbishop Tenison’s 1679 edition of *Baconiana* that had on its flyleaf an ostensible reference to the cipher:

This particular copy was originally owned by John Conybeare, Bishop of Bristol, in 1728. He has inscribed his name on the inside front cover, viz., “liber Johannis Conybeare E[xeter] Coll. Oxon.”, and on the flyleaf, half way down, in exactly the same faded ink and penmanship is written the cipher “A/27.”⁶⁴⁵

The STC flyleaf presents the anonymous *The Repertorie of Records* work as follows ‘Agard, Arthur. The repertorie of records: remaining at Westminster. [Ed. T[homas] Powell.]’.⁶⁴⁶ His indebtedness to Agarde is acknowledged in To the Reader:

*It may be obiected unto me, that the collation of these things, is not all made up and digested into this fabrique of mine owne materials and structure, and I doe ingenously confesse it: Seeing the Foure Treasuries were collected by Mr. Agard, his priuate notes, a man very industrious and painfull in that kinde; and one, who had continuall recourse unto the most, & custody of many of the rest of the same: And the latter Callender of the Records of the Tower, came to my hands from Author unknowne, euen as the Printer was drawing the last sheet of the precedent worke from the Presse...*⁶⁴⁷

Francis Lord Bacon.		17
Highgate, near London, to which Place he casually	6	
repaired about a Week before, God so ordaining	8	
that he should die there of a gentle Fever, acciden-	8	
tally accompanied with a great Cold, whereby the	7	
defluxion of Rheume fell so plentifully upon his	7	
Breast, that he died by Suffocation, and was buried	8	
in St. Michael's Church at St. Albans, being the Place	8	
designed for his Burial by his last Will and Testa-	9	
ment, both because the Body of his Mother was Inter-	8	
red there, and because it was the onely Church then	10	
remaining within the Precincts of old Verulam:	6	
where he hath a Monument erected for him in white	9	
Marble, by the Care and Gratitude of Sir Thomas	7	
Meautys Knight, formerly his Lordships Secretary,	4	
afterwards Clerk of the King's Honorable Privy-	5	
Council under two Kings, representing his full Por-	6	
traiture in the Posture of Studying, with an In-	8	
scription Compos'd by that accomplish'd Gentleman,	4	
and rare Wit, Sir Henry Wotton.	8	
But howsoever his Body was mortal, yet no doubt	8	
his Memory and Works will live, and will in all pro-	9	BL
bability last as long as the World lasteth. In order	5	(18)
to which I have endeavor'd (after my poor Ability)	10	
to do this Honour to his Lordship, by way of en-	4	
ducing to the same.		
	Less-	175
		18
		157
F I N I S.		
The Reader is desired to take notice of a Letter to Doctor A. that should not have been Printed; but for haste being done in three Printing-houles there hapned a mistake. The true Copy, Corrected by Dr. Ainsley, cometh in the twenty seventh Folio following. No other mistake is in the Book.		

PLATE 3. "RESUSCITATIO," 1671.

Fig. 67 Page 17 of the 1671 edition of the *Resuscitatio* relating to the Kay Cipher

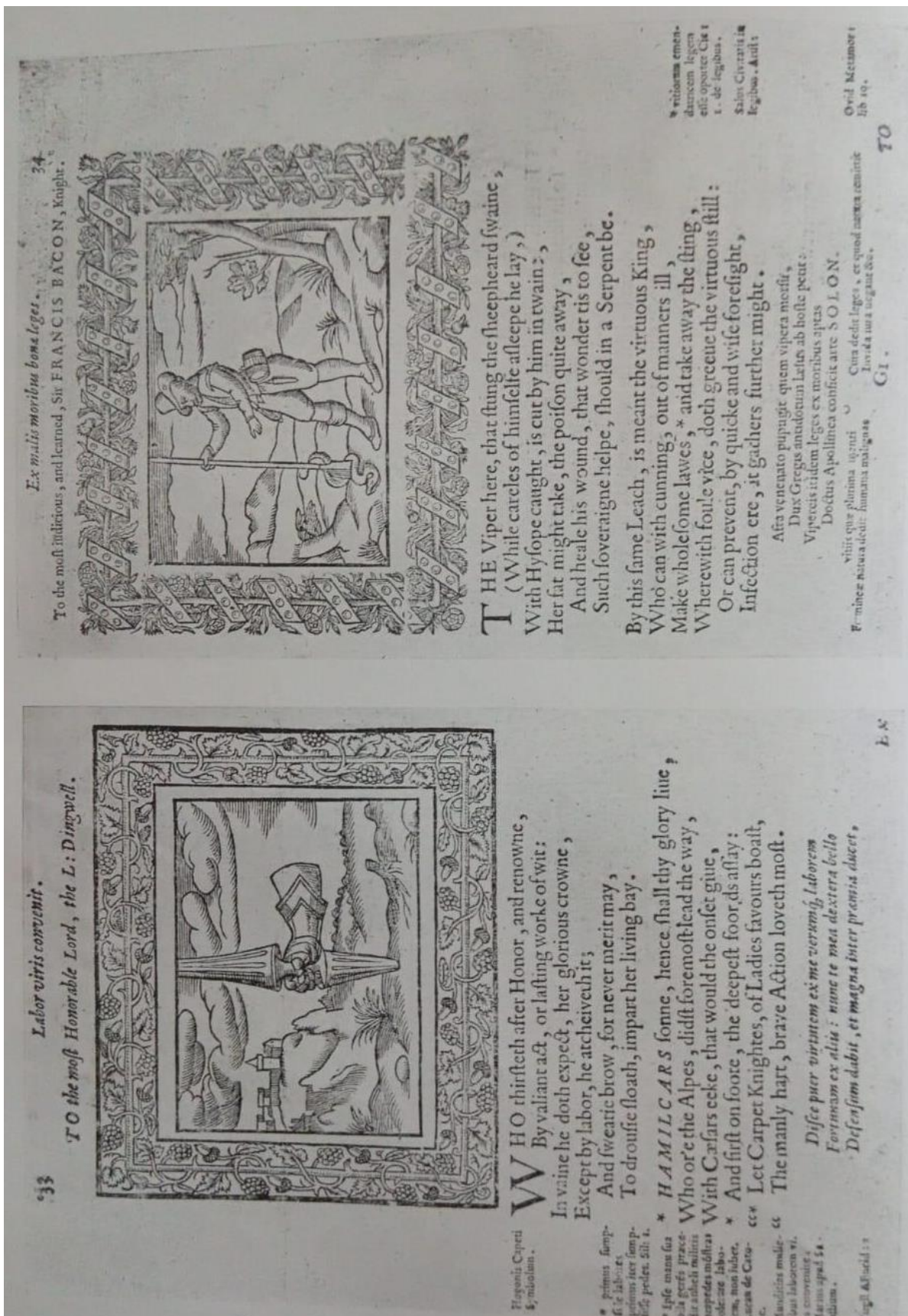


Fig. 68 Pages 33 and 34 from *Minerva Britannica* juxtaposing Bacon with an emblem shaking a spear

Shrouded in mystification on the inside page of *The Repertorie of Records* is a verse addressed 'TO THE VNKNOWNE PATRON' over two pages comprising 33 printed lines:⁶⁴⁸ 33 Bacon in simple cipher. This is followed on the opposite page by another dedication 'TO THE SAME PATRON, THE GREAT MASTER of this MYSTERIE. Our Author payeth this, In part of a more summe due.'⁶⁴⁹

As stated above there begins on page 33 the lettering of the chests starting with A for the first chest and on the following page the letter B is assigned to the second chest. The first of these on page 33 (Bacon in simple cipher) states in a passage comprising 39 words (F. Bacon in simple cipher) these chests were placed in the '*third Treasurie*' in the Chapter House of the Abbey of Westminster '*under a door with three lockes*' (again 3 and 3 placed together yields 33 Bacon in simple cipher). The first two chests are marked A and B with documents from the reign of Henry III 'put into three great bags, noted 'A,B,C' giving the letters BAC an anagrammatic contraction of Bacon.⁶⁵⁰ This list continues on page 85 with the third chest marked C 'In the third Chest...'⁶⁵¹ We eventually arrive at the 24th chest which is marked Z, with the 25th chest marked '&' the 26th 'E', and the 27th with a small 'a'.⁶⁵² Clearly, this was all directed to some definite purpose. Unsurprisingly, the meaning and import of this subtle contrivance in conjunction with the covering strip found in only a few copies of the *Resuscitatio* lay undetected for three centuries until the Baconian Clifton realised they provided the key for assigning the numerical value of the letters for the Kay Cipher.

Eight years earlier Thomas Powell dedicated a relatively little known work entitled *The Attourneys Academy* published within weeks of the Shakespeare First Folio in 1623 to the king and his lifelong friend Bacon in terms that bespoke of his familiarity with Bacon's secret life and writings which has been studiously ignored by his editors and biographers. The reason this revealing dedication to Bacon is not reproduced by Bacon and Shakespeare commentators including the Fraudulent Friedmans is it very obviously alludes to Bacon's secret authorship of the Shakespeare poems and plays with its theatrical metaphor of momentarily pulling the curtain back before closing it again:

TO
TRVE NOBILITIE
AND TRYDE LEARNING,
BEHOLDEN
To no Mountaine for Eminence,
nor Supportment for his Height,
FRANCIS, Lord *Verulam*, and
Viscount *St. Albanes*.

O Giue me leaue to pull the Curtaine by,
That clouds thy Worth in such obscuritie,
Good *Seneca*, stay but a while thy bleeding,
T'accept what I receiued at thy reading:
Heere I present it in a solemne straine,
And thus I pluckt the Curtaine backe againe.

The same
THOMAS POWELL.⁶⁵³

The Repertorie of Records is replete with numerous Baconian ciphers but due to considerations of space by way of example I have confined myself to the important

page denoting the number system pertaining to the key cipher. The twenty sixth chest headed 'E' (which has a numerical value of 5) contains 26 italic letters and the number 2: $6+2+5=33$ Bacon in simple cipher. The whole block has 96 letters which added to the number 2 and the numerical equivalent of 'E': $96+2+5=103$ Shakespeare in simple cipher. Following the 'E' block the blocks continue on the next page starting with 'a' again. These blocks appear on pages 88 and 89: $88+89=177$ William Shakespeare in simple cipher.

Let us now turn to the other key for assigning the numerical values for the Kay Cipher. On page 17 of the *Resuscitatio* (the last page of Dr Rawley's *Life of Bacon*) containing the footnote associating the letter A with the number 27 there are several Baconian ciphers. Along the top of the page is the caption 'Francis Lord Bacon. 17.' The sixteen letters added to the page number 17: $16+17=33$ Bacon in simple cipher. At the bottom of the page in the footnote concealed beneath the strip of paper there are within the large capital letter T 226 non-capital letters and 49 roman words $226+49=177$ William Shakespeare in simple cipher conversely $226+49=275$ which plus the 2 capital letters $275+2=277$ produces a double cipher for Francis Bacon (100)/William Shakespeare (177) in simple cipher.

Following their dishonest suppression of the evidence and misrepresentation of what the Woodward had stated and presented the Fraudulent Friedmans proceeded to use another of the methods of their duplicitous trade. The Friedmans state that a large part of *Francis Bacon's Secret Signatures* is taken up with the pursuit of the mystic number 287 seen by Woodward as the key cipher seal for Fra Rosicrosse, the secret sign of the Brotherhood of the Rosy Cross. As a sly criticism the Friedmans in trying to undermine Woodward and the key cipher which they have already fraudulently misrepresented adopt a mocking tone designed to deride and dismiss it: 'He finds the number almost everywhere he looks.'⁶⁵⁴ It is true the Woodward find examples of the simple and kay ciphers nearly everywhere. In editions of Bacon's acknowledged writings and others written by Bacon behind various pseudonyms, in the Shakespeare quartos and the Shakespeare First Folio. For these simple and kay cipher counts the Woodward reproduce facsimiles and illustrations put before the eyes of their readers so they are able to independently check and verify the cipher counts for themselves. So in some instances all that is required is the reader is able to count the number of letters or words on a page. On the basis of their authority as the two of the greatest cryptographers of the century, the Friedmans confidently and correctly gamble, that not only are these two works by the Woodward difficult to obtain or access, but also that Shakespeare scholars, the ordinary schoolmen, and the rest of the easily deceived world, will lazily take their word for it, allowing them to simply dismiss the presence of the simple and kay ciphers in the Shakespeare works.

With regard to the Shakespeare First Folio published in 1623 containing thirty-six plays, sixteen of which had never been printed before, the Woodward presented their simple and kay cipher discoveries. On the title page of the First Folio the Woodward present a count of 157 letters: 157 Fra Rosicrosse in simple cipher. On the page for the poem To The Reader by Ben Jonson (who at the time the First Folio was working its way through the Jaggard printing press was living with Bacon at Gorhambury) there are precisely 287 letters: 287 Fra Rosicrosse in kay cipher. On the first page of the dedication to William Herbert, Earl of Pembroke, then Grand Master of England and his brother Philip Herbert, Earl of Montgomery (whose cousin the metaphysical poet George Herbert was with Jonson living with Bacon at Gorhambury translating his *De Augmentis*) present a word count of 157 Fra Rosicrosse in simple cipher and

MR. WILLIAM
SHAKESPEARES

COMEDIES,
HISTORIES, &
TRAGEDIES.

Published according to the True Originall Copies.



L O N D O N
Printed by Isaac Iaggard, and Ed. Blount. 1623.

PLATE 21. SHAKESPEARE'S PORTRAIT IN THE FOLIO.

Fig. 69 The 157 Fra Rosicrosse simple cipher count on the title page of the 1623 Shakespeare First Folio

To the Reader.

11

This Figure, that thou here seest put,	20
It was for gentle Shakespeare cut;	28
Wherein the Grauer had a strife	26
with Nature, to out-doo the life :	25
O, could he but haue drawne his wit	27
As well in brasse, as he hath hit	25
His face ; the Print would then surpasse	22
All, that vvas euer vvrit in brasse.	28
But, since he cannot, Reader, looke	27
Not on his Picture, but his Booke.	26

B. I.

2
287

PLATE 6. FIRST FOLIO, 1623.

Fig. 70. The 287 kay cipher count on the poem To the Reader signed by Ben Jonson prefixed to the 1623 Shakespeare First Folio



TO THE MOST NOBLE
AND
INCOMPARABLE PAIRE
OF BRETHREN.

WILLIAM
Earle of Pembroke, &c. Lord Chamberlaine to the
Kings most Excellent Maiesty.

4

AND
PHILIP
Earle of Montgomery, &c. Gentleman of his Maiesties
Bed-Chamber. Both Knights of the most Noble Order
of the Garter, and our singular good
LORDS.

Right Honourable,

Wilst we studie to be thankful in our particular, for
the many fauors we haue receiued from your L.L.
we are false upon the ill fortune, to mingle
two the most diuerse things that can bee, feare,
and rashnesse; rashnesse in the enterprize, and
feare of the successe. For, when we valew the places your H.H.
sustaine, we cannot but know their dignity greater, then to descend to
the reading of these trifles: and, while we name them trifles, we haue
deprind our selues of the defence of our Dedication. But since your
L.L. haue beene pleas'd to thinke these trifles some-thing, heereto-
fore; and haue prosecuted both them, and their Authour liuing,
with so much fauour: we hope, that (they out-liuing him, and be not
bawing the fate, common with some, to be exequutor to his owne wri-
tings) you will vse the like indulgence toward them, you haue done

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157

PLATE 22. "THE EPISTLE DEDICATORIE."

Fig. 71 The 157 simple cipher count on the first page of the dedication to 1623
Shakespeare First Folio

The Epistle Dedicatorie.

3
 11 unto their parent. There is a great difference, whether any Booke
 11 choose his Patrones, or finde them: This hath done both. For,
 12 so much were your L. L. likings of the seuerall parts, when
 12 they were acted, as before they were published, the Volume ask'd to
 13 be yours. We haue but collected them, and done an office to the
 8 dead, to procure his Orphanes, Guardians; without ambition ei-
 13 ther of selfe-profit, or fame: onely to keepe the memory of so worthy
 10 a Friend, & Fellow aline, as was our SHAKESPEARE, by hum-
 12 ble offer of his playes, to your most noble patronage. Wherein, as
 14 we haue iustly obserued, no man to come neere your L. L. but with
 14 a kind of religious addresse; it hath bin the height of our care, who
 14 are the Presenters, to make the present worthy of your H. H. by the
 12 perfection. But, there we must also craue our abilities to be considerd,
 11 my Lords. We cannot go beyond our owne powers. Country hands
 11 reach forth milke, creame, fruites, or what they haue: and many
 10 Nations (we haue heard) that had not gummes & incense, obtai-
 13 ned their requests with a leauened Cake. It was no fault to approch
 11 their Gods, by what meanes they could: And the most, though
 11 meaneest, of things are made more precious, when they are dedicated
 11 to Temples. In that name therefore, we most humbly consecrate to
 10 your H. H. these remaines of your seruant Shakespeare; that
 13 what delight is in them, may be euer your L. L. the reputation
 13 his, & the faults ours, if any be committed, by a payre so carefull to
 12 shew their gratitude both to the liuing, and the dead, as is

287

Your Lordshippes most bounden,

JOHN HEMINGE.
HENRY CONDELL.

PLATE 11. "THE EPISTLE DEDICATORIE."

Fig. 72. The 287 kay cipher count on the second page of the dedication prefixed to the 1623 Shakespeare First Folio

on the second page of the dedication a cipher count of 287 Fra Rosicrosse in kay cipher. The Woodward identify the Rosicrucian simple and kay cipher throughout the Shakespeare First Folio and cipher counts for its secret concealed author, Francis Bacon.

In keeping with the capital letters commencing the preface, introduction and other chapters in *The Shakespearean Ciphers Examined*, the chapter entitled ‘Acrostics and Anagrams’, also commences with a large capital letter. The words and letters within the large capital letter **A** serve as a cryptogram containing a hidden secret message. Within the large capital **A** there is a total of 25 full words and 132 letters: 25+132=157 Fra Rosicrosse in simple cipher and 33 lines of printed text underneath the title of the chapter: 33 Bacon in simple cipher, conveying the concealed message Bacon, Brother of the Rosy Cross.

The simplest form of an acrostic is the use of the initial letter of a line in a poem or prose text to spell out a word, name, or some kind of message. Another form of the simple acrostic is the telestic which takes the final letter of the last word in each line. There is also the progressive simple acrostic which takes the first letter of the first line, the second letter of the second line, the third of the third, etc, and the progressive simple telestic that takes the last letter in the first line, the last but one in the second line, the last but two in the thirds line, and so on.⁶⁵⁵ The Friedmans also set down:

...in the case of acrostics, any message found must have been inserted by the man who wrote the open text; and to change or insert a hidden message would be impossible without changing the open text itself. If, therefore any genuine messages of this kind exist, they must be taken as conclusive.⁶⁵⁶

In their usual arrogant and self-deluded manner the Fraudulent Friedmans went on to state that they would investigate a number of related claims to see if they are genuine or not. What the Fraudulent Friedmans actually meant by this, was not whether any claims for any acrostics found in the Shakespeare poems and plays are genuine or not, but whether they decided they are genuine or not. This duplicity and deceit is further compounded by their deliberate suppression of certain acrostics, anagrams, and other secret signatures present in the Shakespeare works which taken together completely rule out all likelihood of chance and coincidence and make certain Bacon placed them there to be found by posterity confirming his authorship of the Shakespeare works.

The use of acrostics was a favourite pastime of the Elizabethan literati and there are several well-known examples of acrostics in poetry and prose. The Elizabethan poet Sir John Davies composed an elaborate series of twenty-six poems entitled *Hymns to Astraea* each of which spells out the acrostic *Elisabetha Regina*. A few years earlier an anonymous epitaph placed over his tomb in Old St Paul’s Cathedral signed by the initials E. W. written in memory of spymaster Sir Francis Walsingham, Head of the English Secret Service, with whom Francis and Anthony Bacon had worked closely with over the previous decade leading up to his death on 6 April 1590 also contains an acrostic:

Shall Honour, Fame, and Titles of Renowne,
In Clods of Clay be thus inclosed still?
Rather will I, though wiser Wits may frowne,
For to inlarge his Fame extend my Skill.
Right, gentle Reader, be it knowne to thee,
A famous Knight doth here interred lye,
Noble by Birth, renowned for Policie,

CHAPTER VII

ACROSTICS AND ANAGRAMS

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8
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A NUMBER of anti-Stratfordians rely on proofs of authorship based on anagrams or acrostics, or more usually on a combination of both. Acrostic devices have the advantage that, unlike ciphers which depend on accidents of page-numbering or particular kinds of type, they leave no doubt that the author of the open text must also have been responsible for any hidden message—once it is established that one exists. For even if a claim to authorship were found in the First Folio, using Bacon's biliteral cipher, this in itself would not be conclusive. The message could have been inserted by the printer himself, playing an elaborate hoax on posterity. But in the case of acrostics, any message found must have been inserted by the man who wrote the open text; and to change or insert any hidden message would be impossible without changing the open text itself. If, therefore, any genuine messages of this kind exist, they must be taken as conclusive. We shall go on to investigate a number of related claims, to see whether they are genuine or not; but first it will be as well to give some account of anagrams and acrostics in general.

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45
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132

We shall begin with anagrams, since we have already mentioned them briefly in ch. II in connection with the discoveries of Huygens and Galileo. The word 'anagram' comes from the Greek ἀναγραμματίζειν, meaning 'to transpose letters'. 'Anagram' is a noun, but it is also commonly used as a verb in the place of the longer 'anagrammatize'. To anagram means to change some word or phrase into some other word or phrase by changing the order of its letters (e.g. live, veil, evil and vile are all anagrams of one another). In order to be 'perfect' an anagram should not only involve a rearrangement of letters without additions or deletions: the resulting word or words should in some way comment upon the original. The following are examples.¹

¹ Found in Prof. Roger W. Holmes' *The Rhyme of Reason* (New York, 1939).

Fig. 73 The deciphered page of the chapter on 'Acrostics and Anagrams' in *The Shakespearean Ciphers Examined*

Confounding Foes, which wrought our Jeopardy.
 In Forraine Countries their Intents he knew,
 Such was his zeal to do his Country good,
 When Dangers would by Enemies ensue,
 As well as they themselves, he understood.
 Launch forth ye Muses into Streams of Praise,
 Sing, and sound forth Praise-worthy Harmony;
 In *England* Death cut off his dismall Dayes,
 Not wronged by Death, but by false Trechery.
 Grudge not at this imperfect Epitaph;
 Herein I have exprest my simple Skill,
 As the First-fruits proceeding from a Graffe:
 Make then a better whosoever will.
 Disce quid es, quid eris;
 Memor esto quod morieris. E. W.⁶⁵⁷

The anonymous authorship of this epitaph verse to Sir Francis Walsingham remains unknown to the present day. In *Elizabeth's Spy Master Francis Walsingham and the Secret War that Saved England* Robert Hutchinson flimsily suggests it was written by his grand-daughter Elizabeth Walsingham on no other grounds than she shared the initials E.W.⁶⁵⁸ Its true author Bacon was suggested by Henry Seymour in an article published in *Baconiana* entitled 'Bacon's Secret Signature To Contemporary Plays', nearly a century ago.⁶⁵⁹ If the orthography of the acrostic verse has been accurately set down it would appear Bacon cryptically signed it. The first line contains 33 letters: 33 Bacon in simple cipher. In the first four lines its author employs the term Fame twice. This was one of Bacon's favourite words and the subject about which he penned an unfinished essay entitled *Of Fame*. In his essay Bacon says that poets describe Fame 'in part fine and elegantly; and in part gravely and sententious'. Fame 'hideth her head in the clouds: that in the day-time she sitteth in a watch-tower, and flieth by night':

There is not in all the politics a place less handled, and more worthy to be handled, than this of fame. We will therefore speak of these points. What are false fames; and what are true fames; and how they may be best discerned; how fames may be sown and raised; how they may be spread and multiplied; and how may be checked and laid dead.⁶⁶⁰

Underneath the two references to Fame in this acrostic verse addressed to spymaster Sir Francis Walsingham there appears an anagram spelling out the name Bacon.

An anagram is a word, phrase or name, formed using the original letters in a poem or prose text by the process of transposing or rearranging the letters. Even though it is well-known and indisputable that various anagrams have been used to conceal and prove authorship the Fraudulent Friedmans insist that 'anagrammatic methods are too flexible to prove any claim to authorship, since the chances of accidental occurrence must invariably be very high indeed',⁶⁶¹ just more of their self-evident falsehoods that passed for currency in academic Shakespearean circles and the wider world at large.

The first English writer to use the word anagram was the anonymous author of *The Arte of English Poesie* still wrongly attributed by orthodox scholarship to one George Puttenham.⁶⁶² After 'a minute and exhaustive analysis of the work, tracing every contemporary allusion to its date would' writes its editor Edward Arber 'probably but

confirm...that it was written about 1585, and then as, with but few corrections and additions, it was printed in 1589,⁶⁶³ just prior to the period marking the known golden dawn of the Shakespearean era. It was printed by Richard Field the printer of Bacon's two Shakespeare narrative poems *Venus and Adonis* (1593) and *The Rape of Lucrece* (1594). Opposite the title page of *The Arte of English Poesie* is an engraving of his royal mother Queen Elizabeth. A Baconian-Rosicrucian AA headpiece stands above a dedication to Bacon's nominal uncle Sir William Cecil, Lord Burghley married to Lady Mildred Cooke, the elder sister of Bacon's adopted mother Lady Anne Cooke Bacon. In the dedication observes Arber 'the printer was or feigned to be in ignorance of its author'.⁶⁶⁴ The true author of the dedication signed with the initials of its printer Richard Field was Bacon purporting to be Field, so I think we can confidently say as he wrote it, Bacon knew the author was himself! In the dedication Bacon assuming the identity of Field tells Cecil that it had come into his hands 'without any Authours name' and was 'by the Authour intended to our Soueraigne Lady the Queene', but he gave no reason why she had been replaced by Burghley.⁶⁶⁵ With priceless Baconian wit and irony Bacon states in the text that Elizabethan poets (himself included) have written poetry that was published anonymously or without their own names to it-the very *modus operandi* he himself adopted when publishing his Shakespeare poems and plays under his pseudonym William Shake-speare:

Now also of such among the Nobilitie or gentrie as to be very well seene in many laudable sciences, and especially in making or Poesie, it is so come to passe that they haue no courage to write and if the haue, yet they are loathe to be knowen of their skill. So as I know many notable Gentlemen in the Court that haue written commendably and suppressed it agayne, or els suffred it to be published without their owne names to it.⁶⁶⁶

In Bacon's *Nova Resuscitatio or the Unveiling of his Concealed Works and Travels* Rev. Walter Begley devoted eighty pages to revealing and confirming his authorship of *The Arte of English Poesie*.⁶⁶⁷ The relatively little known and even less read work has been systematically ignored, overlooked and suppressed by orthodox Shakespeare scholars and historians of Elizabethan poetry and literature, as well as the Fraudulent Friedmans, for reasons that will become only all too apparent.⁶⁶⁸ Begley immediately examined and dismantled the transparent charade of identifying both Richard and George Puttenham with its authorship before presenting overwhelming external and internal evidence that it was anonymously written by Bacon.

It is universally agreed that *The Arte of English Poesie* is the most systematic and comprehensive work then ever written on the subject of poets and the nature of poetry. In his 1605 edition of his *Remaines concerning Britaine*, Bacon's close friend and fellow Rosicrucian Brother, William Camden says of its author in very Baconian-like language that the 'gentleman proved that Poets were the first Politicians, the first Philosophers, and the first Historiographers'.⁶⁶⁹ A very apposite appraisal which also doubled as an accurate description of its concealed author Bacon who was himself a philosopher, politician, and historiographer. Camden clearly knew of whom he spoke. The last full page of *The Arte of English Poesie* falls on p. 257: 257 is a double cipher for Francis Bacon (100)/Fra Rosicrosse in simple cipher.⁶⁷⁰

Shortly after Begley set forth *Nova Resuscitatio or the Unveiling of his Concealed Works* showing Bacon was the real author of *The Arte of English Poesie* another work appeared from the voluminous Shakespeare scholar William Lowes Rushton entitled *Shakespeare and 'The Arte Of English Poesie'* which he knows has been 'attributed' to George Puttenham. On its first page Rushton sets out his stall 'Knowledge of this old book, with which Shakespeare was very familiar, has enabled me to illustrate

many obscure passages and words and expressions of doubtful meaning. Shakespeare not only introduces in his Plays many of the Figures which Puttenham describes, but he also frequently uses the same words which appear in the examples Puttenham gives of the Figures.⁶⁷¹ In substantiating the premise throughout his treatise Rushton places the figures and words in *The Arte of English Poesie* alongside the relevant passages in the Shakespeare poems and plays from the earliest through to the last plays in the cannon, illustrating the numerous unmistakable correspondences, resemblances and parallels between the two works evident in the poems: *Venus and Adonis*, *The Rape of Lucrece*, *Sonnets*, *A Lover's Complaint*, *The Passionate Pilgrim*, and the comedies, histories and tragedies: *The Taming of the Shrew*, *Two Gentlemen of Verona*, *2 Henry VI*, *3 Henry VI*, *Richard III*, *Comedy of Errors*, *Love's Labour's Lost*, *Richard II*, *Romeo and Juliet*, *A Midsummer Night's Dream*, *The Merchant of Venice*, *Merry Wives of Windsor*, *2 Henry IV*, *Much Ado About Nothing*, *Henry V*, *Julius Caesar*, *As You Like It*, *Hamlet*, *Twelfth Night*, *Troilus and Cressida*, *Othello*, *All's Well That Ends Well*, *Timon of Athens*, *Macbeth*, *Antony and Cleopatra*, *The Winter's Tale*, *Cymbeline*, *The Tempest* and *Henry VIII*.

It should now be clear to all and sundry that when the true authorship of *The Arte of English Poesie* is known (a work written around 1585 or thereabouts when William Shakspeare had not even left Stratford) with its extensive correspondences throughout the whole Shakespeare canon it gives rise to a self-evident and seemingly intractable problem. Some of the early Shakespeare plays which find correspondence in *The Arte of English Poesie* were written before its publication in 1589 propounding that Bacon author of the greatest treatise on poetry and the greatest poet Shakespeare were one and the very same. This was not, of course, raised and confronted by William Lowes Rushton in *Shakespeare And 'The Arte Of English Poesie'*, well at least not in his open plain text, however the work was carefully formatted to ensure it was printed across 167 pages: 167 is a double cipher for Francis (67)/Francis Bacon (100) conveying the secret message that Francis Bacon is the author of *The Arte of English Poesie* and the Shakespeare poems and plays.⁶⁷²

The Ben Jonson copy of *The Arte of English Poesie* now held in the British Library contains eight cancelled pages of a chapter entitled '*Of the device or embleme, and that other which the Greekes call Anagramma, and we the Posie transposed*' which was presumably withdrawn or suppressed while the *Poesie* was going through the press. Use of the word anagram by its anonymous author Bacon marked the first use of the word in the English language. It is said this special copy was given to Ben Jonson by its author who of course could have named its anonymous author but as Ben was also living with Bacon whom he knew to be Shakespeare at Gorhambury when the First Folio was going through the Jaggard printing press, it is clear he knew how to keep a secret. The instructive treatise begins with a discussion on allegorical emblems (several examples of which are produced in the present work pertaining to Bacon's authorship of the Shakespeare works) or what the Italians call *Impresa*. He refers to the Emperor Charles V 'his deuce two pillers with this mot *plus vltra*, as one not content to be restrained within the limits that *Hercules* had set for an vttermost bound to all his trauailes, viz. two pillers in the mouth of the Straight *Gibaltare*, but would go further: which came to passe and whereof the good successe gaue commendation to his deuce'.⁶⁷³ This is precisely the device Bacon famously used on the engraved title page of his *Novum Organum* showing a ship passing beyond the mythical Pillars of Hercules that stand either side of the Gibraltar straits onto the new world representing the renewal of the arts and sciences and all human knowledge for the betterment of humankind. These devices a term which Bacon tells

us in *The Arte of English Poesie* includes ‘emblemes’ and ‘impreses’ are used ‘to insinuate some secret, wittie, morall and braue purpose’,⁶⁷⁴ before moving on to its counterpart headed ‘*Of the Anagramme, or posie transposed*’. He provides examples of the use of anagrams by the Greeks and having only some years before returned from the court of France he recalls how ‘the French Gentlemen haue very sharpe wits and withal a delicate language...and of late years haue taken this pastime vp’ often times for the ‘Princes of the Realms’, regarding which he gives a number of anagrammatic examples.⁶⁷⁵ It is clear from these passages that its author Bacon is familiar with the Greek, Latin, Hebrew, French and Italian languages (the same languages that Lady Bacon was also conversant) and the complicated intricacies of the English language and its application to all kinds of simple and complex anagrams:

I my selfe seeing this conceit so well allowed of in Fraunce and Italie, and being informed that her Maiestie tooke pleasure sometimes in deciphring of names, and hearing how diuers Gentlemen of her Court had essayed but with no great felicitie to make some delectable transpose of her Maiesties name, I would needs try my luck, for cunning I now not why I should call it, vnlesse it be for the many and variable applications of sence, which requireth peraduenture some wit and discretion more then of euery vnlearned man and for the purpose I tooke me these three wordes (if any other in the world) containing in my conceit greatest mysterie, and most importing good to all them that now be aliue, under her noble gouernment.

Elissabet Anglorum Regina.

Which orthographie (because ye shall not be abused) is true and not mistaken, for the letter *zeta*, of the Hebrewes and Greeke and of all other touns is in truth but a double *ss*. hardly vttered, and *H*. is but a note of aspiration onely and no letter, which therefore is by the Greeks omitted. Vpon the transposition I found this to redound.

Multi regnabis ense gloria.
By thy sword shalt thou raigne in great renowne.

Then transposing the word [*ense*] it came to be

Multa regnabis sene gloria.
Aged and in much glorie shall ye raigne.

Both which results falling out vpon the very first marshalling of the letters, without any darknesse or difficultie, and so sensibly and well appropriat to her Maiesties person and estate, and finally so effectually to mine own wish (which is a matter of much moment in such cases) I took them both for a good boding, and very fatallitie to her Maiestie appointed by Gods prouidence for all our comfortes. Also I imputed it for no litle good luck and glorie to my selfe, to haue pronounced to her so good and prosperous a fortune, and so thankfull newes to all England....⁶⁷⁶

In recent times a very substantial body of academic literature has been produced by critics and commentators surrounding the subject of Shakespeare and anagrams.⁶⁷⁷ In the words of Professor Fowler in his own influential *Literary Names Personal Names in English Literature* (Oxford University Press, 2012) ‘Shakespeare’s many anagrams in the *Sonnets* (1609) were lost from view for centuries until R. H. Winnick’s closely argued article (published in 2009) startled the scholarly world’ in which he revealed ‘embedded letter anagrams on WRIOTHESLEY’.⁶⁷⁸ Winnick in turn acknowledges the

work of Helen Vendler, *The Art of Shakespeare's Sonnets* (Harvard University Press, 1997) which proved key to establishing that 'the Sonnets contain numerous instances of anagrammatic wit' of which he provides several examples.⁶⁷⁹ As Professor Vendler observed 'there is always something cryptographic in Shakespeare's sonnet-surfaces-sometimes literally so, as in the anagrams of 7, or as in the play on *vile* and *evil* in 121, but more often merely an oddness that catches the eye and begs explanation.'⁶⁸⁰ Dr Winnick commented that a 'close inspection' of the sonnets 'orthographic patterns suggests...there may be a previously unrecognised nexus binding' their 'onomastic [the study relating to names or nomenclatures-the devising or choosing the names for things] and anagrammatic wit.'⁶⁸¹ He then proceeds to set out the central premise of his long and detailed article. There are, Dr Winnick states, more than a dozen sonnets 'those addressed to, or about, the unnamed, narcissistic, androgynously beautiful Fair Friend' that 'contain short, semantically discrete phrases, most not more than a dozen or so characters long, in which occur the letters needed to form the name Wriothsesley with few or none missing or left over.'⁶⁸² As the article centred around Shakespeare, his sonnets, and Henry Wriothsesley, third Earl of Southampton, it might have been appropriate for Dr Winnick (if he knew it) to draw to the attention of his readers the obscured relationship between Bacon and Southampton.

For reasons that should be obvious Bacon's orthodox editors and biographers and the biographers of Southampton have very carefully avoided placing them together even though Bacon and Southampton had a close relationship with each other from February 1588 when the earl was admitted to Gray's Inn where Bacon had resided for the last decade. In the same month members of Gray's Inn presented Bacon's play *The Misfortunes of Arthur* which finds echo in more than half the Shakespeare canon before Queen Elizabeth at Greenwich.⁶⁸³ For years Bacon had been its *de facto* Master of the Revels composing and producing plays, dramatic entertainments and masques something loved by Southampton who it is said attended the London theatres on an almost daily basis. From the time Southampton was at Gray's Inn with Bacon they afterwards formed an inward relationship that eventually resulted in Bacon dedicating to him his two Shakespeare poems *Venus and Adonis* and *The Rape of Lucrece*. The Earl of Southampton was also the Fair Youth or beautiful Fair Friend to whom Bacon addressed a significant number of his Shakespeare sonnets. Their close relationship continued through the 1590s in which the complex lives of Bacon and Southampton became intertwined with Robert Devereux, second Earl of Essex. The circumstances leading up to the ill-fated Essex uprising adversely impacted upon their relationship. The Earl of Essex was executed for treason but Southampton had his death sentence commuted. On the accession of James I he was released from prison. Buried away in Spedding's seven-volume *Letters and Life of Francis Bacon* is a virtually unknown letter from Bacon to Southampton where he pointedly says to him in reference to their previous relationship 'I may safely be now that which I was truly before':

It may please your Lordship,

I would have been very glad to have presented my humble service to your Lordship by my attendance, if I could have foreseen that it should not have been displeasing unto to you. And therefore, because I would commit no error, I choose to write; assuring your Lordship (how credible soever it may seem to you at first) yet it is true as a thing that God knoweth, that this great change hath wrought in me no other change towards your Lordship than this, that I may safely be now that which I was truly before. And so craving no other pardon than for troubling you with this letter, I do not now begin, but continue to be

Your Lordship's humble and much devoted.⁶⁸⁴

The examination and very close scrutiny of the sonnets by Dr Winnick produced a series of remarkable discoveries which cumulatively taken together puts his findings beyond all reasonable doubt. For example, the phrase ‘Be where you list’ in Sonnet 58 contains the letters to form ‘Be U Wriothesley’.⁶⁸⁵ Twelve of the first thirteen letters in the phrase from the tenth line of Sonnet 39 ‘thy soure leisure’ (‘including its two *u*’s combined to form *w*, a common and permissible anagrammatic substitution’) can be transposed to make the name Wriothesley.⁶⁸⁶ Two of the Shakespeare sonnets each contain all twenty-two letters needed to form the name Wriothesley twice. The fourth line of Sonnet 126 ‘Thy louers withering, as thy sweet selfe grow’st’ has all the letters needed to twice form Wriothesely. The couplet in the special Sonnet 55 ‘So til the iudgement that your selfe arise,/You liue in this, and dwell in louers eies’ again contains within it two anagrams of Wriothesely. The fourth line of Sonnet 17 ‘Which hides your life, and shewes not halfe your parts’ is a near anagram of Wriothesley twice over. As Dr Winnick explains the phrase ‘Which hides your life’ contains ten of the eleven letters needed for Wriothesley ‘along with a nearby *t*, to form one of the line’s two Wriothesleys. In the Conclusion, the highlighted letters in “**shewes not halfe your parts**” comprise ten of the eleven needed, along with a nearby *i*, to form the other.’⁶⁸⁷ An allusion to this cryptographic device is found in *The Two Gentlemen of Verona* in the passage where Julia entreats the wind be calm so as to ‘blow not a word away/Till I have found each letter in the letter’ before saying ‘Loe, here in one line is his name twice writ’ (1:2:124).⁶⁸⁸ Less rare, observes Dr Winnick, ‘but no less telling than the double-Wriothesely lines in sonnets 17 and 126 are the dozen or so instances in which most or all of the letters needed to form Wriothesley’s name once occur within short, thematically relevant, intralinear phrases’.⁶⁸⁹ There is another very curious example which seems to have escaped Dr Winnick’s notice. In the fifth line of Sonnet 14 we read:

Nor can I fortune to **brief** minutes tell

which yields the anagram **I F. BACON**.

If we then turn to lines 9 and 10 of the same sonnet:

But from thine eyes my knowledge I derive,
And, constant stars, in them I read such art

which again yields the anagram **F. BACON**.

It should likewise be recalled writes Dr Winnick that ‘Shakespeare built a key scene’ in *Twelfth Night* ‘on name based anagrammatic wit’ using the letters ‘M.O.A.I.’, a ‘truncated anagram’ of the name, Malvolia.⁶⁹⁰

In ‘All’s I-L-L That Starts “I’Le”: Acrostic Space and Ludic Reading in the Margins of the Early Modern Play-Text’ Professor Sofer itemizes the various acrostic methods in usage prior to and during the Elizabethan era:

By the late sixteenth century, acrostic conventions allowed for vertical, lateral, and/or diagonal movement. Standard varieties included the *initial acrostic* (the first letters of successive verse lines); the *mesostich* (the first letters after caesuras); the *telestich* (the last letters of successive lines); and the *double acrostic* (first and last letters of successive verse lines). As the mesostich and double acrostic demonstrate, acrostics need not conscript

adjacent letters; they can be dilated (or “dispersed”) through a given text. So we can usefully distinguish two acrostic modes: *nondilated* (we follow sequential letters, in whatever direction, without skipping) and *dilated* (we skip over nonsalient letters—for example, in a double acrostic, all letters that neither begin nor end a line—in order to pick out salient ones).⁶⁹¹

He points out that Jonson [who was living with Bacon at Gorhambury assisting him with the translations of his *Essays* while the Shakespeare First Folio was working its way through the Jaggard printing press] in his prefaces to *Volpone* and *The Alchemist* employed acrostic verse poems that summarize the plots. In addition to this Professor Sofer provides ‘a short list’ of sixteenth and seventeenth-century poets who employed acrostic devices: Thomas Wyatt, Thomas Watson, John Salusbury, Edmund Spenser, Josua Sylvester, John Donne, John Cleveland, George Herbert [who also assisted Bacon with his translation of *De Augmentis* while the First Folio was passing through the Jaggard printing press] and John Milton [author of a mysterious verse printed in the Shakespeare Second Folio].⁶⁹² Yet despite offering up the examples of Malvolio in *Twelfth Night* and Julia in *The Two Gentlemen of Verona* Professor Sofer imagines ‘Shakespeare seems to have been relatively immune to the current craze for acrostics, if that is what it was.’⁶⁹³ Nevertheless, several acrostics noted by other scholars in *Titus Andronicus*, *Antony and Cleopatra*, and various sonnets, are wheeled out before his readers but for him ‘These felicitous patterns hardly bear the stamp of authorship’ and ‘on balance, the paucity of acrostic patterning in the margins of the Sonnets argues for Shakespeare’s relative lack of interest in them.’⁶⁹⁴ He then goes on to say ‘the most well-known Shakespeare acrostics hitherto discovered appear not in the *Sonnets* but in *The Comedy of Errors* and *A Midsummer Night’s Dream*’, the last one first identified by the Baconian William Stone Booth,⁶⁹⁵ who discerned a substantial number of acrostic-anagrams revealing and confirming Bacon’s authorship of the Shakespeare poems and plays, which Professor Sofer chose not to present before his learned readers.

The impact of R. H. Winnick’s 2009 article on anagrams and Shakespeare’s sonnets that had apparently so startled the scholarly world was far exceeded a few years later when William Bellamy set forth his ground-breaking work *Shakespeare’s Verbal Art* (Cambridge Scholars Publishing, 2015). The important study reveals and explores the anagrammatic devices that lie beneath the surface of all Shakespearean texts and how these sub-textual devices help to clarify authorial intention and meaning. As exemplar texts he focuses in particular on the sonnets and the plays *Hamlet*, *Othello* and *Twelfth Night* all of which are written and constructed around various concealed anagrams and other related linguistic and cryptic devices:

This is a book about Shakespeare’s virtuosity in the art of anagram...it aims to show how Shakespeare, the greatest poet of his age, may prove also the greatest anagrammatist.

..As will become clear in later chapters, a conventionally “sub-textual” anagrammatism is not only pervasive in Shakespeare’s verse, but is fundamental to his verbal art.⁶⁹⁶

As a consequence of these previously unidentified textually embedded anagrams in the Shakespeare poems and plays:

modern readings of Shakespeare’s texts have necessarily been superficial (“of the surface”), and often wholly inadequate. This is because what Shakespeare appears to be saying in the overt dimension of his text may be amplified, modified, or radically subverted by anagrammatic utterance in the covert dimension. The revelatory anagrams in the covert

dimension of the text must be read in counterpoint to, and in combination with the overt dimension.⁶⁹⁷

In *Literary Names Personal Names in English Literature* (Oxford University Press, 2012) under the heading 'Embedded anagrams' Professor Fowler points out that 'the practice of embedding names received renewed stimulus from the seminal example of Petrarch's *Canzoniere*',⁶⁹⁸ a work known to Bacon (his mother Lady Bacon was an Italian scholar/translator) whose poetry had a direct effect on his Shakespeare Sonnets. The Italian poet established the practice of embedding anagrams in sonnets, a device taken up by the French poet Joachim du Bellay, a founder of the Pleiades, the group of poets Bacon was in touch with at the French court during his time France in the train of the English ambassador Sir Amias Paulet. In Elizabethan England writes Professor Fowler 'four influential poets practiced embedding of name anagrams' three of whom were 'Sidney, Spenser [and] Shakespeare'.⁶⁹⁹ He produces a number of examples of embedded name anagrams identified by Dr Winnick in the Shakespeare Sonnets before concluding:

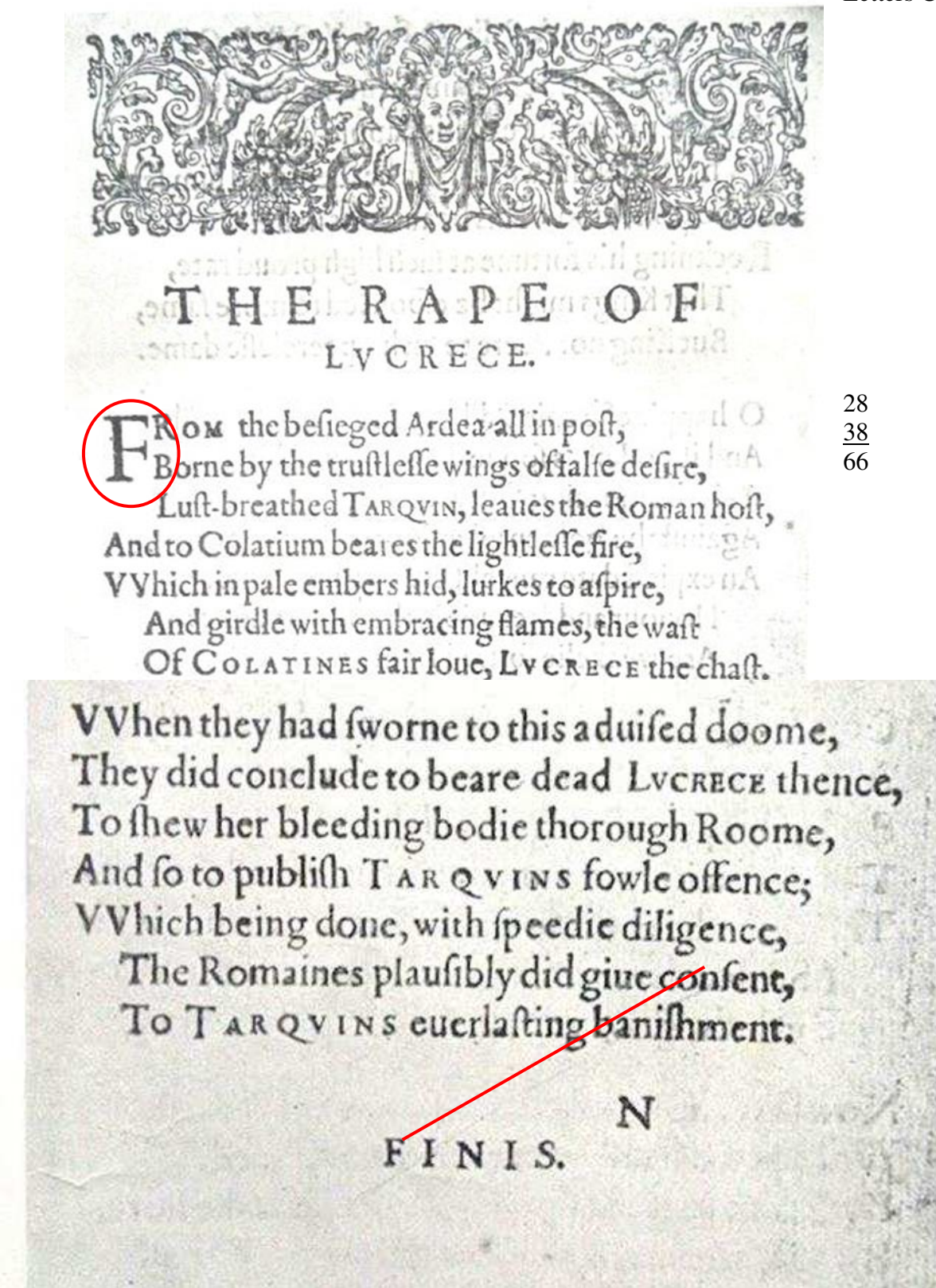
Shakespeare, the greatest poet of his age, may prove also the greatest anagrammatist.⁷⁰⁰

He was undoubtedly the greatest poet and dramatist of his age, or of any age, and he was also its greatest literary cryptographer, anagrammatist and employed all the various other cryptic devices at his command when incorporating his secret signatures in the Shakespeare poems and plays. In his first narrative poem *Venus and Adonis* above the dedication to Henry Wriothesley, Earl of Southampton, underneath which marked the first time the pseudonym William Shakespeare appeared in print, appears the Baconian AA headpiece which also later adorned a number of quarto editions of the Shakespeare plays and Shakespeare First Folio.⁷⁰¹ The following year saw the first edition of *The Rape of Lucrece* with a more intimate dedication to Southampton again signed by Bacon with his pseudonym William Shakespeare. The first two lines of *The Rape of Lucrece* begins with a monogram, a motif of two or more letters, signifying a person's initials used as an overt or cryptic device. The first letter is a very large capital **F** and enclosed within it are two other large capital letters **R** and **B**. These letters represent the initials of Fr [ancis] B [acon] and the two letters commencing the first two lines F and B again stand for the name of Francis Bacon.⁷⁰² Within the large capital **F** there are 66 letter a double cipher for Bacon (33)/Bacon (33) in simple cipher which when added to the large capital **F**: 66+1=67 Francis in simple cipher. On the final page of *The Rape of Lucrece* when a line is drawn from the capital F through the 'b' and 'a' and 'con', of its last two lines it spells out the hidden cryptic signature of F. Bacon.

The monogram FRB also appears in the first edition of the *Shakespeare Sonnets* (below another example of the Baconian-Rosicrucian AA headpiece) many of which were also clearly addressed to Henry Wriothesley which is repeatedly confirmed by numerous embedded anagrams revealed by Dr R. H. Winnick. The large capital **F** and capital **R** (and following the indentation) a capital **B** again provides the initials Fr[ancis] B[acon], the same secret signature which commences *The Rape of Lucrece*. The Shakespeare narrative poem *A Lover's Complaint* was also published as part of the first edition of the *Shakespeare Sonnets* written in rhyme royal, the same metre as *The Rape of Lucrece*. The first verse of *A Lover's Complaint* again commences with a large capital **F** and enclosed within it are two other capital letters **R** and **A** and down below it the letters which make up MY NAME and from the 'b' in the third line

reading upwards 'a' and 'con' for Bacon: thus it reads MY NAME IS FRA [NCIS] BACON.

Letters Cap F



28
38
66

1

Fig. 74 The monogram of Francis Bacon commencing the first stanza of *The Rape of Lucrece* and its last page containing the secret signature F. Bacon



SHAKESPEARES,
SONNETS.

From fairest creatures we desire increase,
That thereby beauties *Rose* might neuer die,
But as the riper should by time decease,
His tender heire might beare his memory:
But thou contracted to thine owne bright eyes,
Feed'st thy lights flame with selfe substantiall fewell,
Making a famine where aboundance lies,
Thy selfe thy foe, to thy sweet selfe too cruell:
Thou that art now the worlds fresh ornament,
And only herauld to the gaudy spring,
Within thine owne bud buriest thy content,
And tender chorde makst wast in niggarding:
Pitty the world, or else this glutton be,
To eate the worlds due, by the graue and thee.

A Louers complaint.

BY

WILLIAM SHAKESPEARE.

From off a hill whose concaue wombe reworded,
A plaintfull story from a sistring vale
My spirrits t'attend this doble voyce accorded,
And downe I laid to list the sad tun'd tale,
Ere long espied a fickle maid full pale
Tearing of papers breaking rings a twaine,
Storming her world with sorrowes, wind and raine.

Fig. 75 The monogram of Francis Bacon commencing the first sonnet in the 1609 edition of *Shakespeares Sonnets* and the same commencing the first verse of *A Lover's Complaint*.

In the same year as *The Rape of Lucrece* there appeared in 1594 the quarto of *A Pleasant Conceited Historie, called The taming of a Shrew* printed by Peter Short wherein above the first page appears the Baconian-Rosicrucian AA headpiece.⁷⁰³ As all Shakespeare scholars know the names of characters in the Shakespeare plays are often of great significance and importance and that the names he gives them can be clues pointing to historical and contemporary real-life models. The subject of names in the Shakespeare plays are of such importance that whole books have been written on the theme, and its variants, including encyclopaedias and dictionaries, and countless other works, that give over a great deal of space attempting to identify the real-life person behind a Shakespeare name and/or character.⁷⁰⁴ *The Taming of the Shrew* is a critically important example of the importance of names in a Shakespeare play which in this instance has been systematically ignored and passed over by orthodox editors and commentators over several centuries for reasons that are about to become manifest.⁷⁰⁵

The little known figure Petruccio Ubaldini who spent a great deal of time with the Bacon family at Gorhambury and York House and had a long hitherto hidden and obscured relationship with Francis Bacon over a period of more than twenty years, was the model for Petruccio in *The Taming of the Shrew*. In the play Petruccio pursues Katherine who shares the Christian name as Bacon's aunt Katherine Cooke Killigrew, the younger sister of his mother Lady Anne Cooke Bacon. In *The Taming of the Shrew* Katherine has a sister named Bianca, from which can readily be derived the anagrammatic contraction AN BAC clearly suggesting the name of Anne Bacon. In the play while able to choose from a countless number of names our concealed dramatist gives Petruccio's father the name of Antonio, the Italian form of the Christian name of his brother Anthony Bacon. He also furnishes its central character Petruccio with several servants, two of whom are named Nicholas and Nathaniel, the Christian names of Bacon's two elder half-brothers (from Lord Keeper Sir Nicholas Bacon's first marriage) Sir Nicholas and Sir Nathaniel Bacon.

In *The Troublesome Reign of King John* (re-titled *The Life and Death of King John* in the First Folio) Bacon explores the law of bastardy, in particular royal bastardy, through the most important and largest role in the play, the royal bastard Sir Philip Faulconbridge. The first eight letters of the surname **Faulconbridge** conceals within it an anagram of F. Bacon. In a scene with the royal bastard Sir Philip Faulconbridge our concealed author inserts reading upwards the anagram **FRA[NCIS] BACON**:

Con. O be remou'd from him, and answere well.
Aust. Doe so king *Philip*, hang no more in doubt.
Bast. Hang nothing but a Calues skin most sweet lout.
Fra. I am perplext, and know not what to say.

[*Shakespeares Comedies Histories, & Tragedies* (London: printed by Isaac Jaggard and Edward Blount, 1623), p. 10]⁷⁰⁶

In Act 1 Scene I the royal bastard Sir Philip Faulconbridge delivers a soliloquy in which he muses on the reality of the world which now awaits him:

But this is worshipful society,
 And fits the mounting spirit like myself;
 For he is but a bastard to the time
 [*The Life and Death of King John*: 1:1:205-7]

In the passage Bacon incorporates one of his secret signatures in the first letters of the first three lines. The first line containing the phrase ‘Worshipful Society’ (an allusion to the Worshipful Society of Freemasons) begins with the letter **B**, the second with the letters **AN** and the third line with the letters **FO**. The rearranged spell out **F B A O N** which is clearly only lacking the letter **C** for **F. BACON**. We do not however need to look too hard for the missing **C**. If we return to the first line the **C** needed to complete the anagram is the third letter in the final word ‘society’ giving us **F. BACON**; and moreover, the numerical value of the letter **C** in Roman numerals is 100 simple cipher for Francis Bacon.

Over Christmas 1594-5 Bacon organised and directed the magnificent Christmas Gray’s Inn Revels that premiered his Shakespeare legal play *The Comedy of Errors*. On the Grand Night of 20 December 1594 ‘a great Presence of Lords, Ladies, and worshipful Personages’ gathered for its performance in the Hall to see to the premier of the play with its themes of errors and confusions later greatly expanded upon by Bacon in *The Advancement of Learning*. In the opening scene Bacon leaves his secret signature in the way of the following anagram of **FRAN [CIS] BACON**:

Five summers have I spent in farthest Greece,
Roaming clean through the bounds of Asia,
And coasting homeward came to Ephesus,
Hopeless to find, yet loath to leave unsought
Or that or any place that harbours men.
But here must end the story of my life,
And happy were I in my timely death
Could all my travels warrant me they live.
[*The Comedy of Errors*: 1: 1: 132-39]⁷⁰⁷

He also secretly inserts in the last scene of the play the following anagram **BACON**:

By this, I think the dial point’s at five.
Anon, I’m sure, the Duke himself in person
Comes this way to the melancholy vale,
[*The Comedy of Errors*: 5: 1: 119-21]⁷⁰⁸

Just for good measure Bacon also adds the following passage:

Thirty-three years have I but gone to travail
Of you, my sons, and till this present hour
My heavy burden ne’er delivered.
[*The Comedy of Errors*: 5: 1: 403-5]

The number 33 is Bacon in simple cipher.

During the late 1580s and early 1590s Bacon began writing the War of the Roses plays *I Henry VI*, *2 Henry VI*, *3 Henry VI* and *Richard III*, otherwise known as the first Shakespeare tetralogy. In the fifth Act of *I Henry VI* he inserts a triple anagram in a single passage:

Into two parties, is now **conioyn**’d in one,
And meanes to giue you **battell** presently.

Char. Somewhat too sodaine Sirs, the warning is,
But we will presently provide for them.

Bur. I trust the Ghost of *Talbot* is not there:
Now he is gone my Lord, you need not feare.

Pucel. Of all **base** passions, Feare is most accurst.
Command the **Conquest Charles**, it shall be thine.

BACON. BACON. BACON.

[*Shakespeares Comedies Histories, & Tragedies* (London:
printed by Isaac Jaggard and Edward Blount, 1623), p. 115]⁷⁰⁹

Shortly after in the fifth Act appears another Baconian anagram:

Puc. Chang'd to a worser shape thou canst not be:

Yor. Oh, *Charles* the dolphin is a proper man,
No shape but this can please your dainty eye.

Puc. A plaguing mischeefe light on *Charles*, and thee,
And may ye be both be sodainly surpiz'd
By bloody hands, in sleeping on your beds.

Yorke. Fell banning Hagge, Inchantresse hold thy
tongue.

F. BACON.

[*Shakespeares Comedies Histories, & Tragedies* (London:
printed by Isaac Jaggard and Edward Blount, 1623), p. 115]⁷¹⁰

Again in the fourth Act of *2 Henry VI* Bacon incorporates the following anagram:

Lieu. First let my words stab him, as he hath me.

Suf. **Base** slaue, they words are blunt, and so art thou.

Lieu. **Conuey** him hence, and on our long boats side

F. BACON.

[*Shakespeares Comedies Histories, & Tragedies* (London:
printed by Isaac Jaggard and Edward Blount, 1623), p. 137]

[*2 Henry VI*: 4: 1 67-9]⁷¹¹

The concluding play of the first Shakespeare tetralogy *Richard III* whose central character was partly modelled on Bacon's cousin the hunchback Sir Robert Cecil (his mother Lady Mildred Cooke Cecil was the elder sister of Lady Anne Cooke Bacon) whom he grew up with, was written in the early 1590s. It was first printed in 1597 by Valentine Sims for Andrew Wise without the name of an author on its title page. A second quarto edition appeared in 1598 printed by Thomas Creede for Andrew Wise this time with the pseudonym 'William Shake-speare' appearing on its title page with a Baconian-Rosicrucian AA headpiece placed at the top of the first page of its text.⁷¹² If we look more closely at the title page (talk about being hidden in plain sight) we see the secret signature of true author **BACON**.⁷¹³

THE
TRAGEDIE
of King Richard
the third.

Conteining his treacherous Plots against his
brother Clarence: the pitiful murder of his innocent
Nephewes: his tyrannicall vsurpation: with
the whole course of his detested life, and most
deserued death.

As it hath beene lately Acted by the Right honourable
the Lord Chamberlaine his seruants.

By William Shake-speare.



LONDON

Printed by Thomas Creede, for Andrew Wise,
dwelling in Paules Church-yard, at the signe
of the Angell. 1598.

Fig. 76 The title page of the 1598 quarto edition of *Richard III* incorporating the secret signature its author Bacon

Both Shakespeare plays *Richard III* and *Richard II* were originally part of Bacon's collection of MSS known as The Northumberland Manuscript (c. 1597). On its outer-cover appears the name of Bacon/Francis Bacon and his pseudonym Shakespeare/William Shakespeare on more than a dozen occasions. Above the entry for *Richard II* appears the entry 'By Mr. ffrauncis William Shakespeare' and further down the page 'Your' is twice written across his pseudonym William Shakespeare: so it reads 'Your William Shakespeare'.⁷¹⁴ The play *Richard II* held in manuscript by Bacon first appeared in print in 1597 again with a Baconian-Rosicrucian AA headpiece placed above the first page of its text.⁷¹⁵ The title page of the anonymous 1597 edition of *Richard II* has been specially formatted. The word 'se-cond' has been deliberately separated for the purpose of a secret signature which upwards reads BACON sending the cryptographic messages that Bacon is Shakespeare. The title page also contains 33 roman words: 33 Bacon in simple cipher. In the text itself Bacon inserts the anagram **BY ONE BACON**:

By this time, had the king permitted us,
One of our souls had wandered in the air,
 Banished this frail sepulchre of our flesh,
 As now our flesh is banished from this land.
Confess thy treasons ere thou fly the realm.
 [Richard II: 1: 3: 187-91]⁷¹⁶

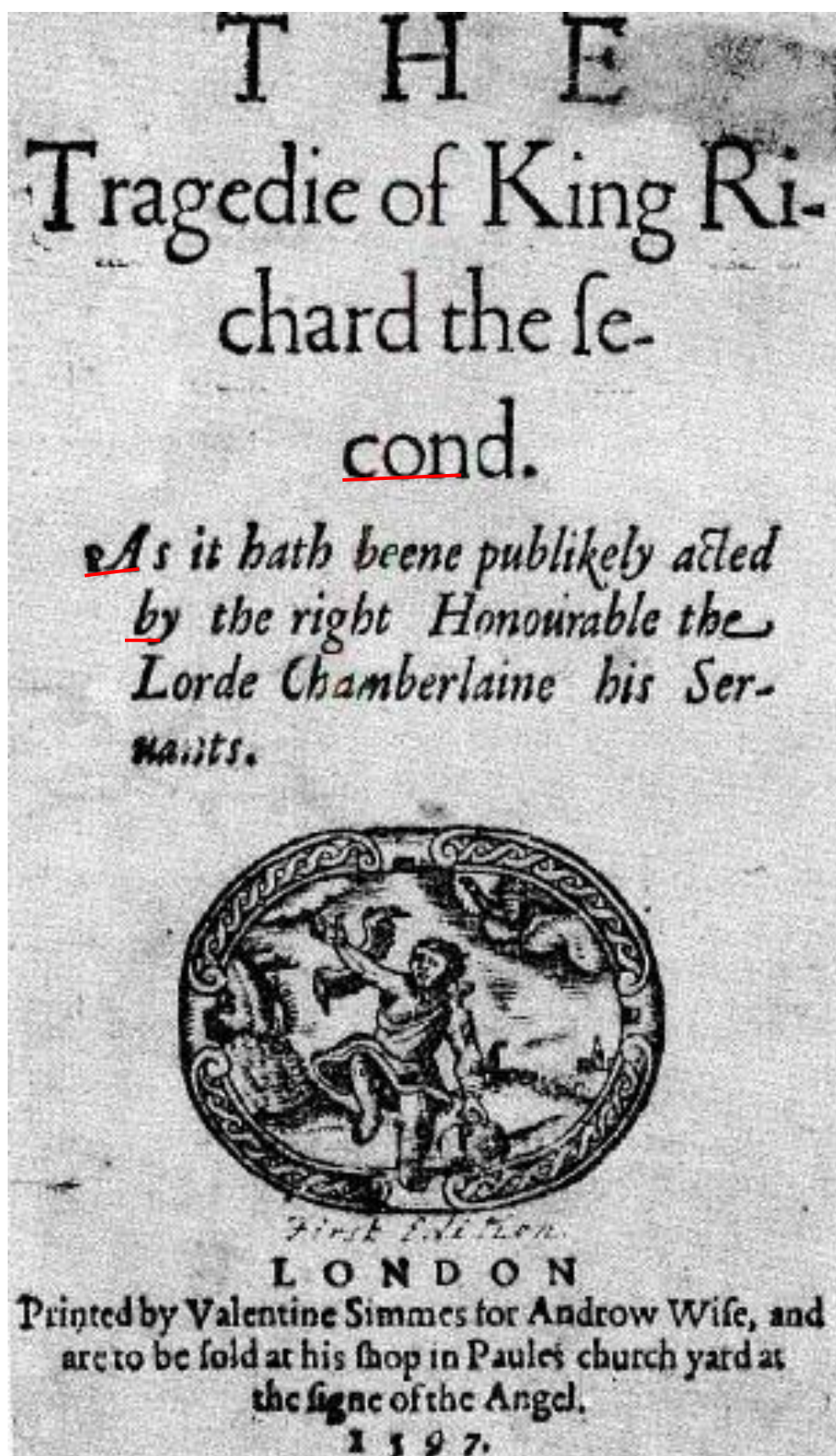
BY ONE BACON.

Around the time Bacon was making use of his manuscript copies of *Richard III* and *Richard II* held in The Northumberland Manuscript in preparation for publication in 1597 he was also busy writing the second play in the second Shakespeare tetralogy (*Richard II*, *I Henry IV*, *2 Henry IV* and *Henry V*) *I Henry IV*. The play was entered on the Stationers' Register on 25 February 1598 and was published in two quartos in the same year, the earliest known of which survives only in an eight-page fragment.⁷¹⁷ There were several more quarto editions before it appeared in the First Folio. It was Ben Jonson who said that Bacon could never pass by a jest and he humorously sends himself up in *I Henry IV* in which there are 33 instances of his name Francis (33: Bacon in simple cipher) in the specially formatted first column on page 56 (Fr. Bacon in simple cipher) in the Shakespeare First Folio. In Act 1 Scene 1 Bacon inserts one of his secret signatures in the form of an anagram:

And for this cause a-while we must neglect
Our holy purpose to Ierusalem.
 Cosin, on Wednesday next, our Councell we will hold
 At Windsor, and so informe the Lords:
But come your selfe with speed to vs againe,
 For more is to be said, and to be done,

F. BACON.⁷¹⁸

[*Shakespeares Comedies Histories, & Tragedies. Published according to the True Originall Copies* (London: printed by Isaac Jaggard and Ed. Blount, 1623), p. 49]



1

4

2

1

8

12

5

33

Fig. 77 The title page of the 1597 edition of *Richard II* incorporating the secret signature of its author Bacon

During 1599 Bacon turned to one of the figures in classical history the Roman leader Julius Caesar who had clearly fascinated him and had already featured in a diverse range of his works: the religio-political tract *An Advertisement Touching the Controversies of the Church of England* (1589), the dramatic device *Tribute or giving that which is due* (c. 1591-2), *Certain Observations Upon a Libel* (c. 1592-3), *The Orations for the Gray's Inn Revels* (1594-5) which saw the premier of *The Comedy of Errors*, and Bacon's private note-book *Promus of Formularies and Elegances* (1594-5),⁷¹⁹ which contained 1655 entries several hundred of which found a correspondence, resemblance and parallel in his Shakespeare plays throughout the whole canon.⁷²⁰ He also referred to Julius Caesar in half-a-dozen of his essays published in 1597,⁷²¹ and wrote a 'Character of Julius Caesar' likely around the same time as his Shakespeare play of the same name.⁷²² He was familiar with all the standard works on Roman history and Julius Caesar and the critical literature surrounding the subject and the man. Both the Greek and Roman historians Plutarch and Suetonius state Julius Caesar was stabbed 23 times but in the play this is changed to 33 times: 33 Bacon in simple cipher:

Come, Come, the cause. If arguing makes us sweat,
The proof of it will turn to redder drops.
Look, I draw a sword against conspirators.
When think you that the sword goes up again?
Never till Caesar's three and thirty wounds
Be well avenged, or till another Caesar
Have added slaughter to the swords of traitors.
[*Julius Caesar*: 5:1: 49-55]

In the text of the play our supreme philosopher-poet adroitly inserts a number of his secret signatures in the form of anagrams of BACON and F. BACON:

But what trade art thou? Answer me directly.
A trade, sir, that I hope I may use with a safe
conscience, which is indeed, sir, a mender of bad soles.
[*Julius Caesar*: 1:1: 12-4]

BACON.⁷²³

Nor airless dungeon, nor strong links of iron,
Can be retentive to the strength of spirit;
But life, being weary of these worldly bars,
[*Julius Caesar*: 1:3: 93-5]

BACON.⁷²⁴

But for supporting robbers, shall we now
Contaminate our fingers with base bribes,
And sell the mighty space of our large honours
For so much trash as may be grasped thus?
[*Julius Caesar*: 4: 2: 75-8]

F. BACON.⁷²⁵

Sometime during 1598 and 1599 Bacon prepared and completed his Shakespeare comedy *Much Ado About Nothing*. The play first appeared in a quarto edition in 1600 printed by Valentine Sims for Andrew Wise and William Aspley whose title page states ‘*it hath been sundrie times publikely acted*’ by the Lord Chamberlain’s Men.⁷²⁶ The play was afterwards published in the First Folio wherein Bacon secretly inserted several anagrams of F. BACON two of which are reproduced below:

doe you any em-
bassage to the Pigmies, rather then hould three words
conference, with this Harpy: you haue no employment
for me?

F. BACON.

[*Shakespeares Comedies Histories, & Tragedies* (London: printed by Isaac Jaggard and Edward Blount, 1623), p. 106]

Bor. Mas and my elbow itcht, I thought there would
a scabbe follow.

Con. I will owe thee an answer for that, and now
forward with thy tale.

F. BACON.

[*Shakespeares Comedies Histories, & Tragedies* (London: printed by Isaac Jaggard and Edward Blount, 1623), p. 112]⁷²⁷

The complex Shakespeare play *Measure for Measure* has at its heart the God-like Rosicrucian figure of Duke Vincentio one akin to Prospero in *The Tempest*. The role of the Duke is one of the longest roles in the Shakespeare canon. He is seen by many Shakespeare scholars as surrogate of the poet-dramatist himself with the joint Arden editors of *Measure for Measure* stating that its author ‘sets up the correspondences between himself and the duke...extensively’, and that the play ‘persistently hints that the Duke is a playwright made in Shakespeare’s image’.⁷²⁸ Or put another way the secretive, complex and enigmatic character of Duke Vincentio, who adopts multiple masks, disguises and identities in *Measure for Measure* represents Shakespeare, that is to say the true author of the play Bacon, who outside of the play itself, also adopts multiple identities and disguises behind his living masks including the pseudonym of Shakespeare. The play is also secretly marked with an anagram of F. BACON:

As I subscribe not that nor any other-
But, in the loss of question, that you his sister,
Finding yourself desired of such a person
 Whose credit with the judge, or own great place,
 Could fetch your brother from the manacles
Of the all-binding law: and that there were
 No earthly mean to save him but that either
 [*Measure for Measure*: 2: 4: 89-95]

F. BACON.⁷²⁹

The opening scene in the immortal play *Hamlet, Prince of Denmark* begins with the two sentinels Francisco and Barnardo. The name Francisco is the Spanish and Portuguese form of the name Franciscus (the baptismal record for Bacon at St Martin-in-the-Fields reads '*Franciscus Bacon*') corresponding to the English name Francis.⁷³⁰ The names of the sentinel Francisco alongside Barnardo yields the Christian name of Francis and the initials of Francis Bacon. The names *Francisco* and *Barnardo* also contain an anagram of Francis Bacon. In the text Bacon also inserts an anagram of **F. BACON**:

Costly thy habit as thy purse can buy,
But not expressed in fancy; rich not gaudy;
For the apparel oft proclaims the man,
And they in France of the best rank and station
[*Hamlet*: 1: 3: 70-3]

F. BACON.

It is generally agreed the tragedy *Othello* was written sometime in 1604 and first acted towards the end of the year. It first appeared in print in a quarto edition in 1622 with another version of *Othello* appearing the following year in the 1623 Shakespeare First Folio. Astonishingly, a comparative examination of the 1622 quarto edition and the version of *Othello* in the 1623 Folio reveals that the latter is 160 lines longer and differs in wording in more than a thousand instances. A fact pointed out by Professor Stanley Wells (Honorary President of the Shakespeare Birthplace Trust and Honorary Governor of the Royal Shakespeare Theatre) and Professor Gary Taylor in *William Shakespeare The Complete Works Second Edition* (Oxford Clarendon Press, 2005):

It first appeared in print in a quarto of 1622; the version printed in the 1623 Folio is about 160 lines longer, and has over a thousand differences in wording. It seems Shakespeare partially revised his play....⁷³¹

It can sometimes be challenging to find measured and reasoned words to describe some of the statements made in standard orthodox works on Shakespeare. Their explanation for the absolutely remarkable situation that the 1623 version is 160 lines longer and has over 1,000 differences in wording from the 1622 version of *Othello* is nonsensical, absurd and false. We can all broadly agree that Shakespeare partially revised his play, even though partially revised hardly seems an adequate description for more than a thousand revisions and amendments in lines and language—a searching and pretty thorough revision might be more appropriate. But here's the rub that professors Wells and Taylor astonishingly glibly passed over in absolute silence. William Shakspeare of Stratford died in 1616, and as far as I am aware, dead men do not six or seven years after their death experience the miracle of resurrection for the purposes of revising one of their plays. For these kinds of fatal blows to the Stratfordian illusion the orthodoxy usually role out a series of so-called authorities and other academics to present a series of convoluted, and frankly embarrassing and ridiculous arguments, to explain away the issue—none of which need detain us.

Let us depart from the weird and mad world of Stratfordianism and return to the sane and reasoned evidence driven world of Baconian scholarship wherein is found the simple logic to account for the thousand plus revisions and amendments from the 1622 version of *Othello* to the version published in the 1623 First Folio. The secret author of *Othello*, and very much alive Lord Bacon (which surely to any sane person is something of an important point), was carrying out these revisions between 1622 and 1622 at Gorhambury with the help of Ben Jonson, the contributor of two verses

to the Folio, who was living with Bacon while the Folio was working its way through the Jaggard printing press. In the text its concealed author thoughtfully inserts an anagram of his name, **BACON**:

Comfort forswear me. Vnkindnesse may do much,
And his vnkindnesse may defeat my life,
But neuer taynt my loue.

BACON.

[*Shakespeares Comedies Histories, & Tragedies* (London:
printed by Isaac Jaggard and Edward Blount, 1623), p. 332]⁷³²

According to its entry in the Stationers' Register on 26 November 1607 the other great Shakespearean tragedy *King Lear* was performed at court on St Stephens Day 26 December 1606 suggesting it was either written or revised in 1605-6. It first appeared in a quarto edition in 1608 as the *True Chronicle Historie of the life and death of King Lear and his three Daughters*.⁷³³ A decade later Bacon in his capacity as Lord Chancellor represented John Jaggard (the publisher of several editions of Bacon *Essays*) in 1618 regarding a dispute on behalf of the poor stationers of London. Towards the end of 1618 or in early 1619 his brother William Jaggard began printing ten Shakespearean plays for his friend the publisher Thomas Pavier. One of the Pavier/Jaggard editions issued in 1619 was a falsely dated second quarto of *King Lear* 'printed for Nathaniel Butter, 1608'.⁷³⁴ These Shakespearean Pavier/Jaggard editions have been subjected to very extensive authorial revisions and amendments which included repeated amendments of speech prefixes, extensive changes to stage directions, changes in language and stylistic preferences, rewritten lines to correct factual mistakes and other errors, as well as very significant changes in the dramatic structure of the plays.⁷³⁵ The authorial changes were of course not made by Shakespeare of Stratford (apart from the fact he was not the author of the Shakespeare works) who had been dead for some three long years. A third version of *King Lear* appeared in the 1623 First Folio which again was subjected to substantial revision, cutting some 300 lines from the first quarto and adding around a 100 new lines to the First Folio version, with several speeches differently assigned, as well as numerous variations in language and wording.⁷³⁶ Our sublime dramatist also inserted several secret signatures here in the form of two anagrams of **BACON**:

Glou. Come hither, fellow.
Edg. And yet I must:
Blesse thy sweete eyes, they bleede.

[*Shakespeares Comedies Histories, & Tragedies* (London:
printed by Isaac Jaggard and Edward Blount, 1623), p. 301]⁷³⁷

BACON.

Or ere Ile weepe: O Fool, I shall go mad.
Corn. Let vs withdraw, 'twill be a storme.
Reg. This house is little, the old man an'ds people,
Cannot be well bestow'd.
Gon. 'Tis his owne blame hath put himselfe from rest,
And must needs taste his folly.
Reg. For his particular, Ile receiue him gladly,

But not one follower.

BACON.

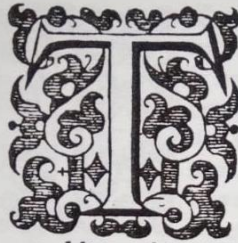
[*Shakespeares Comedies Histories, & Tragedies* (London: printed by Isaac Jaggard and Edward Blount, 1623), p. 295]⁷³⁸

In his *Remains Concerning Britain* (1605) the historian William Camden who was something of an expert on the subject provides numerous examples of Greek and Latin anagrammatic examples relating to English royalty and its nobility. No name of an author appears on the title page, however its dedication 'To the Right Worshipfull, Worthy, and Learned Sir Robert Cotton' is signed with the initials 'M. N.' the last letters of William Camden.⁷³⁹ It appears that Bacon was involved in the production of the work indicated by the presence of his Baconian-Rosicrucian AA headpiece above the first page of its introduction.⁷⁴⁰ Numerous anagrams praise Queen Elizabeth and others rearrange the names of Mary, Queen of Scots and King James. Camden also included anagrams of several leading English figures including Bacon's former tutor John Whitgift, the erstwhile Master of Trinity College, Cambridge, his maternal uncle Sir William Cecil and his son Sir Robert Cecil, leading members of the Bacon-Essex circle, the Earl of Southampton, to whom Bacon dedicated *Venus and Adonis* and *The Rape of Lucrece*, Henry Percy, Earl of Northumberland at whose home one of his descendants was discovered the so-called Northumberland Manuscript that originally contained copies of Bacon's Shakespeare plays *Richard II* and *Richard III*, the Earl of Essex, Sir Fulke Greville and Lord Mountjoy. For the first time in English Camden sets out the rules and conventions surrounding the anagram or anagrammatic devices that included the doubling of letters, omission of a letter, the substitution of letters, the substitution of E and AE, V and W, S and Z, C and K, and contrariwise.⁷⁴¹ We know from Spedding that Bacon and his fellow Rosicrucian Brother Camden worked closely together on his *Annals of Queen Elizabeth* in which passages by Bacon were inserted in the final printed text.⁷⁴² It appears once again Camden and Bacon worked closely together on the production of the 'reviewed, corrected, and encreased' 1614 edition of the *Remains Concerning Britain* which is adorned with several Baconian-Rosicrucian AA headpieces.⁷⁴³ Two of these AA headpieces appear over the chapters on 'Anagrammes' and 'Surnames'. However in the case of the latter the headpiece is printed upside down indicating to the initiated that the page contains important secret information about Bacon. On this page it is written 'At which time Romulus tooke the Sabine name of Quirinus, because he vsed to carie a *speare*, which the Sabines called *Quiris*.'⁷⁴⁴ If we take the two letters of 'of', the last three letters of 'Quirinus', and the first four of 'because', it provides an anagram of F Beaconus (in Elizabethan times Beacon was used for Bacon) or if we drop the 'e' it yields F Baconus the Latin for F. Bacon. Thus Camden (with Bacon) is here linking Bacon with Quirinus the Spearman or the Shaker of the Spear an allusion to Shakespeare. In one of the verses in the *Memoriae* published by Dr Rawley shortly after Bacon's recorded death wherein he is presented as a supreme poet and writer of comedies and tragedies, the poet and dramatist Thomas Randolph (one of Ben Jonson's 'sons') also selected the term of 'Quirinus' the Spearman, an allusion to Shakespeare, when describing Bacon as a divine Minerva [Pallas Athena-the Shaker of the Spear]:

When he perceived that the arts were held by no roots, and like seed scattered on the surface of the soil were withering away, he taught the Pegasean arts to grow, as grew the spear of



Anagrammes.



THE onely Quint-essence that hitherto the *Alchemy* or wit could draw out of names, is *Anagrammatisme*, or *Metagrammatisme*, which is a dissolution of a Name truly written into his Letters, as his Elements, and a new connexion of it by artificiall transposition, without addition, subtraction, or change of any letter into different words, making some perfect sence applyable to the person named.

Surnames.



Surnames.



Surnames giuen for difference of families, and continued as hereditary in families, were vsed in no nation anciently but among the Romans; and that after the league of vnion with the Sabines: for the confirmation whereof, it was couenanted that the Romans should prae fixe Sabine names before their owne, and likewise the Sabines Roman names. At which time *Romulus* tooke the Sabine name of *Quirinus*, because he vsed to carie a speare, which the Sabines called *Quiris*. These afterward were called *Nomina Gentilitia*, and *Cognomina*; as the former were called *Praenomina*. The French and wee termed them *Surnames*, not because they are names of the Sire, or the father, but because they are super-added to Christian names as the Spaniards call them *Renombres*, as *Renames*.
The Hebrews have

Fig. 78 The first pages of the chapters for 'Anagrams' and 'Surnames' in Camden's *Remaines* anagrammatically revealing Bacon is Shakespeare

Quirinus [Spear/Spearman: i.e. Shakespeare] swiftly into a laurel tree. Therefore since he has taught the Heliconian goddesses to flourish no lapse of ages shall dim his glory. The ardour of his noble heart could bear no longer that you, divine Minerva [Pallas Athena the Shaker of the Spear who wore a helmet which rendered her invisible] should be despised. His godlike pen restored your wonted honour and as another Apollo [leader of the Nine Muses presiding over the different kinds of poetry and liberal arts] dispelled the clouds that hid you.⁷⁴⁵

On 22 January 1621 Bacon celebrated his sixtieth birthday with a lavish banquet at his official residence York House on the Strand attended by the great and the good. It is likely that the guest list included several members of his Rosicrucian-Freemasonry Brotherhood including the current Grand Master of England William Herbert, Earl of Pembroke to whom Bacon jointly dedicated his Shakespeare First Folio. For a great writer like Bacon the printers and publishers of the Worshipful Stationers' Company would have doubtless attended including John and William Jaggard the printers and publishers of his *Essays* with whom he had enjoyed a long relationship over a period of several decades. The latter William with his son Isaac Jaggard were shortly to print his Shakespeare First Folio. Then there would have been a glittering array of poets and dramatists, George Herbert, cousin of the joint dedicatees of the First Folio, the poet and dramatist Thomas Randolph, author of the above verse, alluding to the secret Bacon is Shakespeare, and the most important figure regarding the First Folio after Bacon himself, the poet and dramatist Ben Jonson, who for his birthday celebrations wrote an ode entitled 'Lord Bacon's Birthday' in which he describes him as his king, about whom, he says, there is some kind of mystery surrounding him:

Thou stand'st as if some mystery thou didst!

Give me a deep-crowned bowl, that I may sing
In raising him the wisdom of my king.⁷⁴⁶

Following his fall a few months later on 6 June 1621 Bacon wrote an astonishing letter to the Spanish Ambassador Count Gondomar in which he explicitly states that he was to devote himself to the actors in reference to the planned Shakespeare First Folio:

for myself, my age, my fortune, yea my Genius, to which I have hitherto done but scant justice, calls me now to retire from the stage of civil action and betake myself to letters, and to the instruction of the actors themselves, and the service of posterity.⁷⁴⁷

In the last five years of his recorded life Bacon wrote, revised, expanded, translated and published an enormous body of his writings and works in Latin and English. This was carried out in his literary workshop at Gorhambury with the help of his 'good pens', including the poet and dramatist Ben Jonson, who assisted Bacon in translating his essays, previously printed and published by William and John Jaggard, into Latin:

The *Latine* Translation of them [Bacon's *Essays*] were a Work performed by divers Hands; by those of Doctor *Hacket* (late Bishop of *Lichfield*) Mr. *Benjamin Johnson* (the learned and judicious Poet) and some others, whose Names I once heard from Dr. *Rawley*; but I cannot now recal them.⁷⁴⁸

The preliminary pages of the Shakespeare First Folio consist of a verse signed by Ben Jonson facing the Droeshout portrait. The same poet and dramatist, a member of his Rosicrucian Brotherhood, also provides another long commendatory poem 'To the

memory of my beloued, The Avthor Mr. William Shakespeare’, whom Ben has known for many years to be nothing more than a pseudonym, or literary mask, for his Rosicrucian Grand Master, Lord Bacon. In the closing lines ‘To the memory of my beloued, The Avthor Mr. William Shakespeare’ its author Ben Jonson has deftly inserted two anagrams spelling out the name of the true Shakespeare, **BACON**:

*But stay, I see thee in the Hemisphere
Advanc’d, and made a **Constellation** there!
Shine forth, thou Starre of Poets, and with rage,
Or influence, chide, or cheere the drooping Stage:
Which, since thy flight fro[m] hence, hath mourn’d like night,
And despaire day, but for thy Volumes light.⁷⁴⁹*

BACON.
BACON.

Confirmation Ben Jonson knew that Shakespeare was a pseudonym or literary mask for his long time inward friend and Rosicrucian Master Lord Bacon comes in the same verse ‘To the memory of my beloued, The Avthor Mr. William Shakespeare’:

*Leaue thee alone, for the comparison
Of all, that insolent Greece, or haughtie Rome
sent forth, or since did from their ashes come.⁷⁵⁰*

The words Ben Jonson later employs to describe Bacon in his *Timber and Discoveries*:

He, [Bacon] who hath fill’d up all numbers; and perform’d that in our tongue, which may be compar’d, or preferr’d, either to insolent *Greece*, or haughty *Rome*.⁷⁵¹

It is no coincidence that *The Tempest* was placed first in the 1623 Shakespeare First Folio. The Rosicrucian manifesto is perhaps the most Baconian of all the Shakespeare plays. Its central figure Prospero is a complex dramatic portrait made in the image of his creator, the scientific-philosopher Bacon, Founding Father of Modern Science and the Modern World. The first play of the Shakespeare First Folio commences with a large ornamental B which when magnified reveals the name Francis across the top and Francis at the bottom and the name Bacon down the right side.⁷⁵² On the second page of *The Tempest* as printed in the Shakespeare First Folio its concealed author has inserted an anagram spelling out **F. BACON**:

For thou must now know farther.
Mira. You haue often
Begun to tell me what I am, but stopt
And left me to a bootelesse Inquisition,
Concluding, stay: not yet.

F. BACON.

[*Shakespeares Comedies Histories, & Tragedies* (London:
printed by Isaac Jaggard and Edward Blount, 1623), p. 2]⁷⁵³

Just as the poems *The Rape of Lucrece*, the first sonnet in the *Shakespeare Sonnets*, and first verse of *A Lover's Complaint* commence with various monograms of Francis Bacon, and the last page of the *Lucrece* contains the secret signature F. Bacon, *The Tempest* ends with the word 'free' (the name Francis means Free) thus giving us with the first letters of the first and last word of the text, the initials F B, the initials of its secret author, Francis Bacon.

We have likewise seen that a large initial capital letter **F** to indicate the presence of cryptic devices and ciphers was used by Bacon in his Shakespeare poem *The Rape of Lucrece*, the first sonnet in the edition of *Shakespeares Sonnets* and as the first letter in the first verse of *A Lover's Complaint*. In the same manner the address '*To the great Variety of Readers*' prefixed to the First Folio also begins with a large capital **F** set within a woodcut resulting in the indentation of the first seven lines. The cryptic phrase in the first and second line 'There you are number'd' points to the alert reader the presence of ciphers within the lettered woodblock as well as the rest of the page. The large capital **F** with the capital **R** (as with the previous examples) forms the monogram **FR** for Francis. The reverse reading under the **F** lettered woodblock yields **BACO** the contracted name of its author Bacon and reading downward from the **F** the first three lines yields an anagram of **FR BACON**. The first and last lines within the woodblock contain 39 letters F. Bacon in simple cipher. The whole block contains a total of 68 words comprising 271 letters: $271+68=339$ a quadruple cipher for Francis Bacon (100)/Francis Bacon (100)/Francis Bacon (100)/F. Bacon (39) and conversely $271-68=203$ a double cipher for Francis Bacon (100)/Shakespeare (103) all in simple cipher. The page is framed by a headpiece and the title of its address '*To the great Variety of Readers*', contains 6 words comprising 26 letters: $1+6+26=33$ Bacon in simple cipher and the bottom of the page we read A 3 and the four words *John Heminge/Henrie Condell* containing 24 letters: $1+3+4+24=32$ which plus the headpiece gives a total of 33 Bacon in simple cipher and when added to the 6 words in the address $33+6=39$ F. Bacon in simple cipher. The text of the address comprises a sum total of 39 lines F. Bacon in simple cipher. Thus the cryptographic message repeatedly conveyed in the address '*To the great Variety of Readers*' prefixed to the First Folio is Francis Bacon is Shakespeare.

The large capital **F** (the initial of Francis) is understood by the initiated to represent a secret code whereby concealed and arcane information about Bacon is about to be disclosed for those with eyes to see understood and practised by the invisible powers truly responsible for *The Shakespearean Ciphers Examined*. As we have seen, if we turn to the first page of the Preface commencing the work, we see that the first word on the first line is adorned by a very large capital **F** and the first letter on the last line in the paragraph is a b (in believe) providing the initials of Francis Bacon. Below the large capital **F** if we use the d as a reverse b we have the letters C, O, A, N, B an anagram of BACON thus giving us **F BACON**. Within the large capital **F** there is a total of 135 roman letters and 2 capital letters $135-2=133$ a double cipher for Francis Bacon (100)/Bacon (33) in simple cipher. The whole paragraph contains a total of 67 words: 67 Francis in simple cipher. Similarly, the last paragraph has a total of 67 words again Francis in simple cipher and if we subtract the 1 word in quotation marks ('inside'): $67-1=66$ a double cipher for Bacon (33)/Bacon (33) in simple cipher. The whole page contains 33 lines of printed text again Bacon in simple cipher. Finally, the last printed line of text contains 46 letters and beneath it in roman numerals vii for number 7: $46+7=53$, an occult number in Baconian-Rosicrucian-Freemasonic circles denoting the letters SOW in simple cipher standing for SONS OF WISDOM or members

words
on block

Letters on block

1 headpiece
26

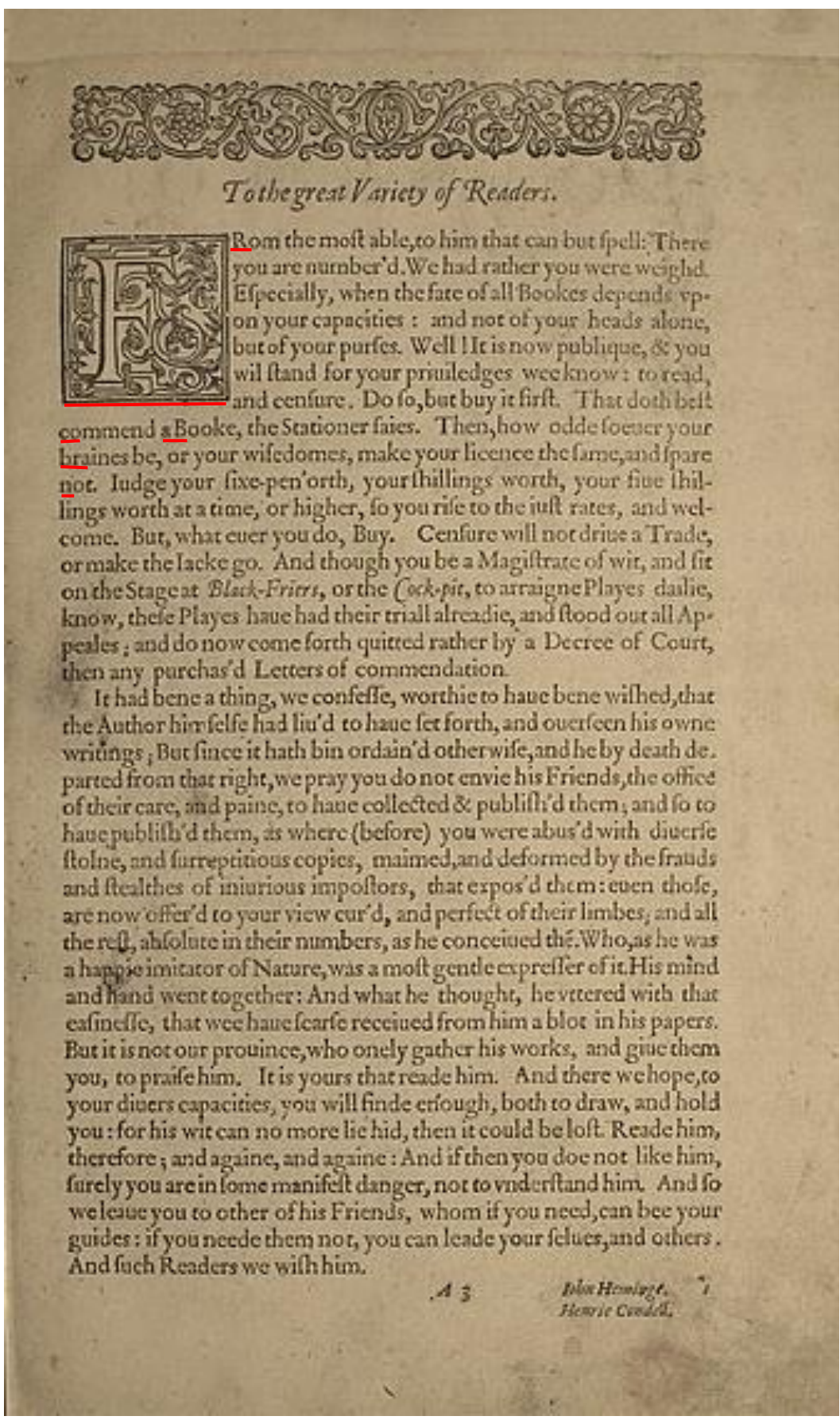
6

11
9
8
9
11
9
11

68

39
37
41
38
38
39
39

271 Letters



L W
24 4
A = 1 + 3 = 4

Fig. 79 The address 'To the great Variety of Readers' prefixed to the Shakespeare First Folio revealing Bacon is Shakespeare

of Bacon's Baconian-Rosicrucian-Freemasonry Brotherhood who carefully watch over his hidden legacy and control the methods of delivery for its disclosure.

The preface and the introduction and each and every one of the nineteen chapters in *The Shakespearean Ciphers Examined* commences with a large capital letter whose numerical value using the Elizabethan 24 letter alphabet produces a total of 277 a double cipher for Francis Bacon (100)/William Shakespeare (177) in simple cipher conveying the cryptographic message that Francis Bacon is Shakespeare.

The Shakespearean Ciphers Examined that had denied through its open plain text that there were any Baconian ciphers present in the Shakespeare works was published by Cambridge University Press on 4 October 1957. The date like the rest of the book is a Baconian-Rosicrucian cryptogram. There are 7 letters in October and the numbers in the date $4+1+9+5+7=26$: $7+26=33$ Bacon in simple cipher and if the null '9' is dropped from the date it leaves 157 Fra Rosicrosse in simple cipher conveying the cryptographic message that Bacon, Brother of the Rosy Cross, is Shakespeare.

Let us revisit the title page of *The Shakespearean Ciphers Examined* a work on cryptography or codes and ciphers by William and Elizebeth Friedman, the greatest cryptographers of the twentieth century revealing and confirming that Francis Bacon is Shakespeare. For the purpose of encipherment the title page is divided into halves above and below the Cambridge University crest. In the top half of the title page there are 33 words printed in block capitals: 33 Bacon in simple cipher. The 33 words contain 190 letters: $190-33=157$ Fra Rosicrosse. A sum total of 100 letters precede 'WILLIAM SHAKESPEARE': 100 Francis Bacon in simple cipher. In the bottom half of the page there are 29 block capital letters and 4 digits in the date: $29+4=33$ Bacon in simple cipher. The whole page contains a total of 38 block capital words and 1 ampersand: $38+1=39$ F. Bacon in simple cipher. Moreover the 190 block capital letters in the top half of the page minus the 29 block capital letters and the 4 digits in the date of the bottom half $190-33=157$ Fra Rosicrosse in simple cipher.

The last full page of text prior to the index in *The Shakespearean Ciphers Examined* falls on page 287 Fra Rosicrosse in kay cipher. Along the top of the page is written 'CONCLUSION' comprising 10 block capital letters. The page number $287-10=277$: Francis Bacon (100)/William Shakespeare (177) in simple cipher. The last page 288 has 104 words in the text and 4 block capital words at the top of the page 'THE SHAKESPEAREAN CIPHERS EXAMINED' $104-4=100$ Francis Bacon in simple cipher. The 4 block words contain 31 letters subtracted from the page number $288-31=257$ Francis Bacon (100)/Fra Rosicrosse (157) in simple cipher. The whole book of *The Shakespearean Ciphers Examined* including the index runs to 303 pages. When the null '0' is dropped it leaves 33 Bacon in simple cipher. Thus repeatedly as seen above *The Shakespearean Ciphers Examined* is one enormous cryptogram conveying the secret message that Francis Bacon, Brother of the Rosy Cross, is Shakespeare.

When William F. Friedman died in 1969 at the age of seventy-eight he was buried with full military honours at Arlington National Cemetery. His widow Elizebeth S. Friedman (most probably with the help of her husband before he died) designed his gravestone headed by a pair of crossed flags, symbol of the Signal Corps responsible for military communications (mostly in codes and ciphers) that included his favourite maxim 'Knowledge is Power' expressed by Lord Bacon in *Meditationes Sacrae* first published in the first edition of his *Essays* in 1597.⁷⁵⁴ Within the maxim 'Knowledge is Power' Elizebeth inserted a secret message using Bacon's Bi-literal Cipher, the cipher system which had first brought them together at the Riverbank estate decades earlier, where they headed the Cipher Department before Friedman began his career working for US Intelligence. She specified that certain letters were carved with serifs

THE
SHAKESPEAREAN CIPHERS
EXAMINED

AN ANALYSIS OF CRYPTOGRAPHIC
SYSTEMS USED AS EVIDENCE THAT
SOME AUTHOR OTHER THAN
WILLIAM SHAKESPEARE
WROTE THE PLAYS COMMONLY
ATTRIBUTED TO HIM

BY
WILLIAM F. FRIEDMAN
&
ELIZEBETH S. FRIEDMAN



CAMBRIDGE
AT THE UNIVERSITY PRESS
1957

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Fig. 80 The enciphered title page of *The Shakespearean Ciphers Examined* revealing that Bacon, Brother of the Rosy Cross, is Shakespeare

(a slight projection finishing off a stroke of a letter in a typeface) and the rest in sans serif (meaning in the absence of or without any serifs) distinguishing one typeface from another. In Bacon's maxim 'Knowledge is Power' using his Bi-literal Cipher it produces (discounting the last letter r) the following sequence of babaa/aabab/aabab giving us the letters WFF for William F. Friedman. The a and b forms were sketched out by Elizebeth on a surviving piece of paper (held in the Elizebeth Smith Friedman Collection at the George C. Marshall Research Foundation) and she later informed R. W. Clark, author of *The Man Who Broke Purple* that it contained the cipher message WFF, as a tribute to her husband who had Bacon's maxim 'Knowledge is Power' on his desk where he carried out a lot of his cipher work.⁷⁵⁵ When his wife Elizebeth died in 1980 she was buried alongside her husband and her name, and the date of her birth and death, were added to the tombstone. Prior to the discovery of Elizebeth's hand written note the secret message conveyed through Bacon's Bi-literal Cipher was first discovered by the cryptographer Elonka Dunin after she paid a visit to the Friedmans' grave where she noticed the chiselled mix of serif and sans-serif letter designs, who proceeded to decipher it.⁷⁵⁶ Yet unbeknown to Dunin, the Friedmans' biographers, Bacon and Shakespeare scholars, and the rest of the world, the tombstone of William F. Friedman and Elizebeth S. Friedman the two greatest cryptanalysts of the twentieth century and authors of *The Shakespearean Ciphers Examined*, conceals another secret cipher message of explosive and far reaching implications, whose consequences it would be simply impossible to overestimate, which is here revealed for the first time.

Let us then take another look at the Friedmans' tombstone which is framed at the top with the insignia of Signal Corps whose very lifeblood is codes and ciphers and at the bottom by the Bacon maxim Knowledge is Power cut in such a way to utilise Bacon's Bi-literal Cipher to incorporate a secret message containing the initials of William F. Friedman. The cryptanalyst forever associated with the presence of Baconian ciphers in the Shakespeare works which in the plain open text of *The Shakespearean Ciphers Examined* the Friedmans fraudulently denied, when they knew the opposite to be true, and throughout their whole lifetimes, continued to lie to the rest of the world about it, a secret they took to their graves, but not beyond it.

The tombstone designed by William and Elizebeth Friedman contains 1 insignia and a sum total of 16 words and 98 letters. In addition to this it incorporates four sets of numbers marking the Friedmans' birth and death dates. The addition of the four sets of numbers $1+8+9+1+1+9+6+9+1+8+9+2+1+9+8+0=82$ and moreover between these dates appear a total of 6 dots. When all the characters and numbers are added together $1+16+98+82+6=203$ producing a double cipher for Francis Bacon (100)/Shakespeare (103) in simple cipher. Thus the tombstone of William F. Friedman and Elizebeth S. Friedman using Bacon's Simple Cipher System conveys the concealed truth which they had secretly known all their lives, one they wished to reveal to posterity in a way befitting two Bacon-Shakespeare cryptanalysts, that for whatever reason while they were alive, they could not or dared not, say openly and out loud:

FRANCIS BACON IS SHAKESPEARE.



Fig. 81 The enciphered tombstone of William and Elizebeth Friedman revealing that Bacon is Shakespeare

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"Elizabeth, angered by hearing what pass'd between Queene Mary and my father, stept forth quickly, discov'ring herselfe and adminst'red a reproofe my father understood farre better than Queen Mary could. 'Tis a subject of wonder that it did not signe both death warrants, for th' trouble that was spoken of in this matter was constantly increasing evidence that a Cypher us'd in Mary's forraine correspondence had been the medium by which a complai'te had beene made of her treatment, and pleas widelie disseminated for assistance.

The Queene set me at discyph'ring this, nor can I deny, indeed that it grew so clear that it would glimmer through the dullest of eies that the imprisoned Queene did not intend anything short of her own proper enthronization. She did effect greatly both France and Spaine, partly because of her religion, and partly, in respect of France, because of her brief, but happy union formerly with Francis Second, a brother of Henry, th' soveraigne then on th' throne. And whilst many of the epistles were difficult, and to me impossible, -not having th' keie, to decypher, my labours had better fruits than I on my owne part wish'd, for I had a secret sympathy for this poor wanderer although by no meane interesting or engaging myself on anie dangerous chance."

[William F. Friedman & Elizebeth S. Friedman, *The Cryptologist Looks at Shakespeare*, Unpublished Typescript Ms., p. 143]

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77. Desmond Bland, ed., *Gesta Grayorum Or The History Of The High and Mighty Prince Henry Prince of Purpoole Anno Domini 1594* (Liverpool University Press, 1968), p. 30.
78. For a list of those attending see Julian Martin, *Francis Bacon, the State, and the Reform of Natural Philosophy* (Cambridge University Press, 1992), p.199n67 and Lisa Jardine and Alan Stewart, *Hostage to Fortune The Troubled Life of Francis Bacon* (London: Victor Gollancz, 1998), pp. 167-8.
79. Desmond Bland, ed., *Gesta Grayorum Or The History Of The High and Mighty Prince Henry Prince of Purpoole Anno Domini 1594* (Liverpool University Press, 1968), pp.36-8. For a discussion of the Christmas Gray's Inn Revels and *The Comedy of Errors* see also A. Phoenix, 'Francis Bacon And The Law In His Early Shakespeare Plays Reflected In His Life And Acknowledged Writings (2021), pp. 1-81, at pp. 57-68, available at www.sirbacon.org/francisbaconsociety.co.uk.
80. Desmond Bland, ed., *Gesta Grayorum Or The History Of The High and Mighty Prince Henry Prince of Purpoole Anno Domini 1594* (Liverpool University Press, 1968), pp. 44-55. These six speeches by Bacon are reprinted by Spedding, *Letters and Life*, I, pp. 332-41; Brian Vickers, ed., *Francis Bacon A Critical Edition Of The Major Works* (Oxford University Press, 1996), pp. 51-60; Alan Stewart with Harriet Knight, eds., *Early Writings 1584-1596* (Oxford Clarendon Press, 2012), pp. 595-605.
81. Alfred Dodd, *Francis Bacon's Personal Life Story* (London: Rider & Company, 1986), p. 155.
82. *Ibid.*, p. 156.
83. Desmond Bland, ed., *Gesta Grayorum Or The History Of The High and Mighty Prince Henry Prince of Purpoole Anno Domini 1594* (Liverpool University Press, 1968), pp. 70, 76.
84. For the time Anthony Bacon spent in Navarre and his close relationship with King Henry of Navarre see Daphne Du Maurier, *Golden Lads A Study of Anthony Bacon, Francis and their friends* (London: Victor Gollancz Ltd, 1975), *passim*.
85. A. Chambers Buntin, 'Notes On Anthony Bacon's Passports of 1586', *Baconiana*, December 1925, Vol. XVIII No. 69 (Third Series), pp. 93-104; See also Jean Overton Fuller, *Francis Bacon A Biography* (London and The Hague: East-West Publications, 1981), p. 122.
86. For Antonio Perez and Francis and Anthony Bacon see Spedding, *Letters and Life*, I, pp. 324-5; Lisa Jardine and Alan Stewart, *Hostage to Fortune The Troubled Life of Francis Bacon* (London: Victor Gollancz, 1998), pp. 161-3, 181-3; N. B. Cockburn, *The Bacon-Shakespeare Question: The Baconian theory made sane* (Guildford and Kings Lynn: 1998), pp. 130-1.
87. Frank J. Burgoyne, ed., *Collotype Facsimile & Type Transcript Of An Elizabethan Manuscript Preserved at Alnwick Castle, Northumberland* (London: Longmans, Green, and Co., 1904), pp. xv-xviii.
88. *Shakespeares Comedies Histories, & Tragedies. Published according to the True Originall Copies* (London: printed by Isaac Jaggard and Edward Blount, 1623), p. 136. As far as the present writer is aware this was first pointed out by Sir Edwin Durning-Lawrence in *Bacon is Shake-speare* (New York: The John McBride Co., 1910), pp. 103-4, and plates XX and XXI.
89. Brian Vickers, ed., *Francis Bacon A Critical Edition Of The Major Works* (Oxford and New York: Oxford University Press, 1996), p. 546 and Michael

- Kiernan, ed., *The Essayes or Counsels, Civill and Morall* (Oxford Clarendon Press, 2000), p. lxvii.
90. Michael Kiernan, ed., *The Essayes or Counsels, Civill and Morall* (Oxford Clarendon Press, 2000), p. lxvii and Brian Vickers, ed., *Francis Bacon A Critical Edition Of The Major Works* (Oxford and New York: Oxford University Press, 1996), p. 546.
 91. Michael Kiernan, ed., *The Essayes or Counsels, Civill and Morall* ((Oxford Clarendon Press, 2000), pp. lxvii-lxviii and Brian Vickers, ed., *Francis Bacon A Critical Edition Of The Major Works* (Oxford and New York: Oxford University Press, 1996), p. 546.
 92. Francis Bacon, *Essayes. Religious Meditations. Places of perswasion and diswassion. Scene and allowed* (London: printed for Humfrey Hooper, 1597), A3^r-A4^r (STC 1137; Gibson, no.1).
 93. Thomas Birch, ed. *Memoirs Of the Reign of Queen Elizabeth, From the Year 1581 till her Death, In Which The Secret Intrigues of her Court, And the Conduct of her Favourite, Robert Earl of Essex, both at Home and Abroad, Are Particularly Illustrated. From the Original Papers of his intimate Friend, Anthony Bacon, Esquire, And other Manuscripts never before published* (London: printed for A. Millar, 1754), II, pp. 354, 355, 356; Spedding, *Life and Letters*, I, pp. 243, 244, 245, 246, 248-50, 321, 323-4; II, p. 28; Daphne Du Maurier, *Golden Lads A Study of Anthony Bacon, Francis and their friends* (London: Victor Gollancz Ltd, 1975), p. 100; Joyce Treskunoff Freedman, 'Anthony Bacon And His World, 1558-1601', (PhD, Temple University, 1979), 'The Bacon Brothers and Their Finances', pp. 179-197; Lisa Jardine and Alan Stewart, *Hostage to Fortune The Troubled Life of Francis Bacon* (London: Victor Gollancz, 1998), pp. 200, 201, 204, 205, 206-8; A. Phoenix, 'Francis Bacon (Bassanio/Bellario) And Anthony Bacon (Its Titular Character Antonio) And *The Merchant of Venice*' (2021), pp. 1-43, at pp. 5-13 available at both www.sirbacon.org/francisbaconsociety.co.uk.
 94. For the letters see Spedding, *Letters and Life*, II, pp. 106-8; Daphne Du Maurier, *Golden Lads A Study of Anthony Bacon, Francis and their friends* (London: Victor Gollancz Ltd, 1975), pp. 205-8; Lisa Jardine and Alan Stewart, *Hostage to Fortune The Troubled Life of Francis Bacon* (London: Victor Gollancz, 1998), pp. 198-9.
 95. William Shakespeare, *The Most excellent Historie of the Merchant of Venice. With the extreame crueltie of Shylocke the Iewe towards the sayd Merchant, in cutting a iust pound of his flesh: and the obtaining of Portia by the choyse of three chests. As it hath beene diuers times acted by the Lord Chamberlaine his Seruants. Written by William Shakespeare* (London: printed by James Roberts for Thomas Heyes, 1600).
 96. William Stone Booth, *Subtle Shining Secrecies Writ In the Margents of Books Generally Ascribed To William Shakespeare, The Actor And Here Ascribed To William Shakespeare, The Poet* (Boston: Walter H. Baker Company, 1925), pp. 126-7. For a discussion see A Phoenix, 'Francis Bacon (Bassanio/Bellario) And Anthony Bacon (Its Titular Character Antonio) And *The Merchant of Venice*' (2021), pp. 1-43, at pp. 13-37, at www.sirbacon.org/francisbaconsociety.co.uk.
 97. Daphne Du Maurier, *Golden Lads A Study of Anthony Bacon, Francis and their friends* (London: Victor Gollancz Ltd, 1975), pp. 258-9; Norman Egbert McClure, ed., *The Letters of John Chamberlain* (Philadelphia: The American Philosophical Society, 1939), I, p. 123.

98. A. Phoenix, 'Francis Bacon And His Earliest Shakespeare Play *Hamlet* A Tudor Family Tragedy'(2021), pp. 1-109 www.sirbacon.org/francisbaconsociety.co.uk.
99. This is pointed out by Martin Pares in 'Hamlet Cryptic Signatures', *Baconiana*, Vol. LXIV, No. 181, November 1981, pp.43-52, at p. 43.
100. Alfred Dodd, *Francis Bacon's Personal Life-Story* (London: Rider and Company, 1986), p. 42; Jean Overton Fuller, *Francis Bacon A Biography* (London and The Hague: East-West Publications, 1981), pp. 25, 26n1.
101. Spedding, *Letters and Life*, III, p. 248.
102. Francis Bacon, *The Advancement of Learning*, ed., Michael Kiernan (Oxford Clarendon Press, 2000), pp. 121-2.
103. Edwin Eliot Willoughby, *A Printer Of Shakespeare The Books And Times of William Jaggard* (London: Philip Allan & Co. Ltd, 1934), p. 73. See Michael Kiernan, ed., *The Essayes or Counsels, Civill and Morall* ((Oxford Clarendon Press, 2000), p. cix who states Hooper is not known to have transferred his copy to Jaggard and no transfer is recorded in the Stationers' Register and as Hooper continued to publish during this period and as far as is known made no objection to Jaggard's 1606 publication of Bacon's *Essays* some arrangement must have been reached between the parties.
104. Francis Bacon, *Essaies. Religious Meditations. Places of perswasion and diswassion. Scene and allowed* (London: printed for Iohn Iaggard, dwelling in Fleere streete at the hand and Starre neere Temple barre, 1606). It also reprints the dedication to Anthony Bacon, A2^r-A3^r (STC 1139; Gibson, no.4).
105. Francis Bacon, *Essaies. Religious Meditations. Places of perswasion and diswasion. Scene and allowed* (London: printed for Iohn Iaggard, dwelling in Fleere-streete at the Hand and Starre neere Temple barre, 1612). It also reprints the dedication to Anthony Bacon, A4^r-B1^r (STC 1139.5; Gibson, no.5). This is a paginary reprint of the 1606 edition.
106. Francis Bacon, *The Essaies of Sr Francis Bacon Knight, the Kings Atturney Generall. His Religious Meditations. Places of Perswasion and Disswasion. Seene and allowed* (London: printed for Iohn Iaggard, dwelling at the Hand and Starre betweene the two Temple Gates, 1613), A3^r (STC 1142; Gibson 8).
107. Edwin Eliot Willoughby, *A Printer Of Shakespeare The Books And Times of William Jaggard* (London: Philip Allan & Co. Ltd, 1934), p. 121.
108. For unrelated mentions of Jonson see William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), pp. 3, 9, 110, 121, 130 156, 157, 194, 203.
109. Spedding, *Letters and Life*, VII, pp. 166, 574, 576.
110. Ibid., *Letters and Life*, VII, p. 576.
111. Ibid., *Letters and Life*, VII, p. 166.
112. Lisa Jardine and Alan Stewart, *Hostage to Fortune The Troubled Life of Francis Bacon* (London: Victor Gollancz, 1998), p. 132.
113. Ibid., p. 442. In the most recent biography by Robert P. Ellis, *Francis Bacon The Double-Edged Life of the Philosopher and Statesman* (Jefferson, North Carolina: McFarland & Company, Inc., Publishers, 2015) the name of Ben Jonson is not even found on the Index.
114. Lisa Jardine and Alan Stewart, *Hostage to Fortune The Troubled Life of Francis Bacon* (London: Victor Gollancz, 1998), p. 442.
115. Spedding, *Letters and Life*, VII, p. 285n2; Lisa Jardine and Alan Stewart,

- Hostage to Fortune The Troubled Life of Francis Bacon* (London: Victor Gollancz, 1998), p. 473.
116. Thomas Tenison, ed. *Baconiana. Or Certain Genuine Remains of Sir Francis Bacon* (London: printed by J. D. for Richard Chiswell, 1679), p. 60.
 117. *Shakespeares Comedies Histories, & Tragedies. Published according to the True Originall Copies* (London: Printed by Isaac Jaggard, and Ed. Blount, 1623).
 118. *Ibid.*, p. '993'.
 119. Edwin Eliot Willoughby, *A Printer Of Shakespeare The Books And Times of William Jaggard* (London: Philip Allan & Co. Ltd, 1934), pp. 175-7. I have taken much of the material used here from A. Phoenix, 'The Secret, Hidden, And Obscured, Relationship Between Francis Bacon And The Jaggards, Printers And Publishers Of His *Essays* And The First Folio Of The Shakespeare Works' (2021), pp. 1-51, available at www.sirbacon.org/francisbaconsociety.co.uk.
 120. James Anderson, *The New Book Of Constitutions Of The Antient and Honourable Fraternity Of Free and Accepted Masons. Containing Their History, Charges, Regulations, &c. Collected and Digested By Order of the Grand Lodge from their old Records, faithful Traditions and Lodge Books, For the Use of the Lodges* (London: printed for Brothers Caesar Ward and Richard Chandler, 1738), p. 99.
 121. *Shakespeares Comedies Histories, & Tragedies. Published according to the True Originall Copies* (London: Printed by Isaac Jaggard, and Ed. Blount, 1623), 'To the memory of my beloued, The Avthor Mr. William Shakespeare'.
 122. Ben Jonson, *Timber: Or, Discoveries; Made Vpon Men And Matter: As They have flow'd out of his daily Readings; or had their refluxe to his peculiar Notion of the Times* (London: printed 1641), pp. 37-8.
 123. Francis Bacon, *Opera Francisci Baronis De Vervlamio, Vice-Comitis Sancti Albani; Tomvs Primvs: Qui continet De Dignitate & Augmentis Scientiarum Libros IX. Ad Regem Svvm* (Londini, In Officina Ioannis Haviland, 1623), p. 277.
 124. Gustavus Selenus, *Cryptomenytices et Cryptographiae Libri IX. In quibus & planissima Stegnanographiae a Johanne Trithemio, Abbate Spanheimensi & Herbipolensi, admirandi ingenij Viro, magice & aenigmatice olim conscriptae, Encodatio traditur. Inspersis ubique Authoris ac Aliorum, non contemnendis Inventis* (Exscriptum typis & impensi Johannis & Henrici fratrum der Sternen Bibliopolarum Lunaeburgensium. Anno M. DC. XIII). The publication details are printed on the last page of the work, p. 494.
 125. William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), pp. 117, 181-2:

The original 'string cipher' was described by August II, duke of Braunschweig-Lunenbourg, who writing in Latin under the pseudonym of 'The Man in the Moon', explained it in a book called *Cryptomenytices et Cryptographiae* (Luneburg, 1623).

Pierre Henrion, writing in *Baconiana* in July 1950, finds Bacon's 'signatures' on the portrait page of Gustavus Selenus' *Cryptomenytices et Cryptographiae* (1623), which suggests to him that 'Selenus' was really Bacon; the editorial in the following issue, though not disputing the signatures, points out that the real subject of the portrait was Trithemius, Abbot of Spanheim, whose *Steganographiae* (1499) was incorporated in the same volume.

126. David Kahn, *The Codebreakers The Story of Secret Writing* (New York: Scribner, 1967, 1996), p. 154.
127. Ibid., p. 1016. There is no entry for Gustavus Selenus and *Cryptomenytices et Cryptographiae* in David Newton, *Encyclopedia Of Cryptology* (Oxford: ABC-CLIO, 1998). For entries on Selenus and *Cryptomenytices et Cryptographiae* see Joseph S. Galland, *An Historical And Analytical Bibliography Of The Literature of Cryptology* (Evanston: Northwestern University, 1945), pp. 166-7 and David Shulman, *An Annotated Bibliography of Cryptography* (New York & London, Garland Publishing, Inc., 1976), p. 10.
128. Pierre Henrion, 'Bacon, Selenus And Shakespeare A Revealing Link', *Baconiana*, Vol. XXXIV, No. 136, 1950, pp. 135-46, at pp. 136-8; The Editor, 'Francis Bacon And The Concealed Abbot Trithemius', *Baconiana*, Vol. XXXIV, No. 137, 1950, pp. 205-11, at p. 205 from which the description in the text is closely based upon.
129. Pierre Henrion, 'Bacon, Selenus And Shakespeare A Revealing Link', *Baconiana*, Vol. XXXIV, No. 136, 1950, pp. 138-9.
130. Ibid., p. 139.
131. John William Henry Walden, trans., *The Cryptomenytices and Cryptography of Gustavus in Nine Books. Wherein is also contained a most clear Elucidation of the Steganographia, A Book at one time composed, in Magic and Enigmatic form, by Johannes Trithemius, Abbot of Spanheim and a Man of Wonderful Parts. There being throughout introduced Devices by the Authors and Others, which merit your Attention*. Copies of it are held in the Fabyan Collection, at the Library of Congress, Washington DC, the University of Pennsylvania Library, and the Harper Memorial Library, University of Chicago, see Joseph S. Galland, *An Historical And Analytical Bibliography Of The Literature of Cryptology* (Evanston: Northwestern University, 1945), pp. 167 and David Shulman, *An Annotated Bibliography of Cryptography* (New York & London, Garland Publishing, Inc., 1976), p. 10. The English translation of Dr Walden is now available at sirbacon.org/ResearchMaterial/sbk1.htm. For a discussion of the *Cryptomenytices and Cryptography* see Gerhard. F. Strasser, 'The Noblest Cryptologist', *Cryptology*, Vol. 7, No.3, July 1983, pp. 193-217.
132. Charles P. Bowditch, *The Connection Of Francis Bacon With The First Folio Of Shakespeare's Plays and with the Books on Cipher Of His Time* (Cambridge University Press, 1910), p. 12.
133. Ibid., p.13. See also Sir Edwin Durning-Lawrence, *Bacon is Shakespeare* (New York: The John McBride, Co., 1910), pp. 112-3.
134. Charles P. Bowditch, *The Connection Of Francis Bacon With The First Folio Of Shakespeare's Plays and with the Books on Cipher Of His Time* (Cambridge University Press, 1910), p.13.
135. Ibid., p. 13.
136. Ibid., pp. 13-4.
137. Ibid., p. 16.
138. Comyns Beaumont, 'Did Francis Bacon Die In 1626', *Baconiana*, Vol. XXXV, No. 139, Spring 1951, pp. 79-86, at pp.79-83; Thomas Bokenham, 'Trithemius, the Rosicrucians and "Shakespeare"', *Baconiana*, Vol. LIII, No. 169, September 1969, pp. 20-29, at pp. 21-3; Thomas Bokenham, 'Cryptomenytices and the Shakespeare First Folio', *Baconiana*, Vol. LIII, No. 170, November 1970, pp. 45-55, at pp. 46-7; Peter Dawkins, *The Shakespeare Enigma* (London: Polair Publishing, 2004), pp. 326/445.

139. For a description and analysis of these panels from all of whom I benefited see W. H. Mallock, 'New Facts Relating To The Bacon-Shakespeare Question', *The Pall Mall Magazine*, Vol. XXIX, January 1903, pp. 86-9; Sir Edwin Durning-Lawrence, *Bacon is Shakespeare* (New York: The John McBride, Co., 1910), pp. 125-9 and Charles P. Bowditch, *The Connection Of Francis Bacon With The First Folio Of Shakespeare's Plays and with the Books on Cipher Of His Time* (Cambridge University Press, 1910), pp. 8-10.
140. Sir Edwin Durning-Lawrence, *Bacon is Shakespeare* (New York: The John McBride, Co., 1910), p. 125.
141. Frances Yates, *The Rosicrucian Enlightenment* (London and New York: Routledge, 1993), p. 251.
142. Ibid., 'Francis Bacon 'Under The Shadow Of Jehova's Wings'', pp. 118-29; for the passage referring to the Sprat frontispiece see p. 192, reproduced between pp. 208-9.
143. A. E. Waite, *The Real History of the Rosicrucians founded on their own Manifestos, and on facts and documents collected from the writings of Initiated Brethren* (London: George Redway, 1887), p. 96.
144. William T. Smedley, *The Mystery Of Francis Bacon* (London: Robert Banks & Son, 1912), pp. 144-5.
145. Charles P. Bowditch, *The Connection Of Francis Bacon With The First Folio Of Shakespeare's Plays and with the Books on Cipher Of His Time* (Cambridge University Press, 1910), pp. 11-12; Thomas Bokenham, 'Cryptomentices and the Shakespeare First Folio', *Baconiana*, Vol. LIII, No. 170, November 1970, pp. 47-8.
146. C. M. Pott, *The Promus Of Formularies And Elegances (Being Private Notes, circ. 1594, hitherto unpublished) By Francis Bacon Illustrated And Elucidated By Passages From Shakespeare* (London: Longmans, Green and Co., 1883), pp. 105, 327-8.
147. Spedding, *Works*, VI, p. 387; Michael Kiernan, ed., *The Essayes or Counsels, Civill and Morall* (Oxford Clarendon Press, 2000), p. 20; Brian Vickers, ed., *Francis Bacon A Critical Edition Of The Major Works* (Oxford and New York: Oxford University Press, 1996), p. 349.
148. Spedding, *Works*, III, pp. 404-5.
149. Sir Edwin Durning-Lawrence, *Bacon is Shakespeare* (New York: The John McBride, Co., 1910), p. 126.
150. Gustavus Selenus, *Cryptomenytices et Cryptographiae Libri IX. In quibus & planissima Stegnanographiae a Johanne Trithemio, Abbate Spanheimensi & Herbipolensi, admirandi ingenij Viro, magice & aenigmatice olim conscriptae, Encodatio traditur. Inspersis ubique Authoris ac Aliorum, non contemnendis Inventis* (Exscriptum typis & impensi Johannis & Henrici fratrum der Sternen Bibliopolarum Lunaeburgensium. Anno M. DC. XIII), Book IV, Chapter VI, p. 141.
151. Charles P. Bowditch, *The Connection Of Francis Bacon With The First Folio Of Shakespeare's Plays and with the Books on Cipher Of His Time* (Cambridge University Press, 1910), pp. 18-47; Sir Edwin Durning-Lawrence, *Bacon is Shakespeare* (New York: The John McBride, Co., 1910), pp. 103-112; Pierre Henrion, 'Bacon, Selenus And Shakespeare A Revealing Link', *Baconiana*, Vol. XXXIV, No. 136, 1950, pp. 135-46; Thomas Bokenham, 'Trithemius, the Rosicrucians And "Shakespeare"', *Baconiana*, Vol. LIII, No. 169, September 1969, pp. 20-29; Thomas Bokenham, 'Cryptomenytices and the Shakespeare First

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152. For this title page see Alfred Dodd, *The Personal Poems Of Francis Bacon (Our Shakespeare) The Son Of Queen Elizabeth* (Liverpool: Daily Post Printers, 1938), pp. 269-70 and James Phinney Baxter, *The Greatest Of Literary Problems The Authorship Of The Shakespeare Works* (Boston and New York: Houghton Mifflin Company, 1917), pp. 424-5.
 153. G. Stuart Smith, *A Life in Code Pioneer Cryptanalyst Elizebeth Smith Friedman* (Jefferson, North Carolina: McFarland & Company, Inc., Publishers, 2017), p. 16.
 154. Jason Fagone, *The Woman Who Smashed Codes A True Story of Love, Spies, and the Unlikely Heroine Who Outwitted America's Enemies* (New York: HarperCollins, 2017), p. 39.
 155. Spedding, Works, III, pp. 156-66.
 156. I have primarily taken the information on the Riverbank estate from Darlene Larson and Laura Hiebert, 'The Fabyan Legacy' in Geneva, Illinois' in *A History of Its Times and Places*, ed., Julia M. Ehresmann (Geneva, Illinois: Published by Geneva Public Library District, 1977), pp. 155-81 and John W. Kopec, *The Sabines at Riverbank Their Role in the Science of Architectural Acoustics* (Woodbury, New York: Acoustical Society of America, 1997), pp. 19-42.
 157. Elizebeth S. Friedman, Unpublished Autobiography, Riverbank Laboratories, Geneva, Illinois, p. 1.
 158. Ibid., p. 1.
 159. Ibid., p. 1.
 160. Ibid., p. 1.
 161. Ibid., p. 2.
 162. Ibid., p. 2.
 163. Ibid., p. 3.
 164. Ibid., pp. 3-4.
 165. Francis Bacon, *Opera Francisci Baronis De Vervlamio, Vice-Comitis Sancti Albani; Tomvs Primvs: Qui continet De Dignitate & Augmentis Scientiarum Libros IX. Ad Regem Svvm* (Londini, In Officina Ioannis Haviland, 1623), p. 277.
 166. Francis Bacon, *Of The Advancement And Proficiency Of Learning or the Partitions of Sciences IX Bookes Written in Latin by the Most Eminent, Illustrious & Famous Lord Francis Bacon Baron of Verulam Vicount St Alban Counsilour of Estate and Lord Chancellor of England. Interpreted by Gilbert Wats* (Oxford: printed by Leonard Lichfield printer to the University for Robert Young and Edward Forrest, 1640), pp. 264-5.
 167. Elizabeth Wells Gallup, *The Bi-literal Cypher of Sir Francis Bacon discovered in his works And Deciphered By Mrs. Elizabeth Wells Gallup* (Detroit, Michigan: Howard Publishing Company: London Gay and Bird, 1899), p. 44.
 168. Ibid., p. 44.
 169. William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), p.193.
 170. There is a considerable body of work produced by Baconian scholars stretching back more than one hundred and thirty years. As it constitutes a relatively

unknown and important body of work and lacks the benefit of a previous bibliography I have thought it best to provide a list of the books and articles known to the present writer for the benefit of the reader and any future researcher. The following list covers all aspects of the subject: Orville W. Owen, *Sir Francis Bacon's Cipher Story*, 5 vols., (Detroit and New York: Howard Publishing Company, 1894); Elizabeth Wells Gallup, *The Bi-literal Cypher of Sir Francis Bacon discovered in his works* (Detroit, Michigan: Howard Publishing Company: London Gay and Bird, 1899); Elizabeth Wells Gallup, *The Tragedy Of Anne Boleyn. A Drama In Cipher From In The Works Of Sir Francis Bacon* (Detroit, Michigan, U.S.A.: Howard Publishing Company: London Gay and Bird, 1901); Elizabeth Wells Gallup, *The Bi-literal Cypher of Sir Francis Bacon discovered in his works Part II* (Detroit, Michigan: Howard Publishing Company: London Gay and Bird, 1901); Parker Woodward, *The Early Life Of Lord Bacon* (London: Gay and Hancock, Ltd, 1902); Harold Bayley, *The Tragedy of Sir Francis Bacon* (London: Grant Richards, 1902); Elizabeth Wells Gallup, *Concerning The Bi-Literal Cypher Of Francis Bacon Discovered In His Works Pros And Cons Of The Controversy Explanations, Reviews Criticisms and Replies* (Detroit, Michigan, U.S.A.: Howard Publishing Co: London Gay and Bird, n.d.); Elizabeth Wells Gallup, *The Bi-literal Cypher Of Francis Bacon Discovered In His Works Deciphered Secret Story 1622 to 1671 The Lost Manuscripts Where They Were Hidden* (Detroit, Michigan, U.S.A.: Howard Publishing Co: London Gay and Hancock, 1910); Granville C. Cunningham, *Bacon's Secret Disclosed In Contemporary Books* (London: Gay and Hancock, Ltd, 1911); Parker Woodward, *Tudor Problems Being Essays On The Historical And Literary Claims Ciphered And Otherwise Indicated by Francis Bacon* (London: Gay and Hancock, Ltd, 1912); Amelie Deventer Von Kunow, *Francis Bacon Last Of The Tudors*, trans., Willard Parker (New York: published by Bacon Society of America, 1921); C.Y. C. Dawbarn, *Uncrowned A Story Of Queen Elizabeth And The Early Life of Francis "Bacon" As Told In His Secret Writings And In Other Contemporary Records Of Her Reign* (New York And Toronto: Longmans, Green and Co., 1923); S.A.E. Hickson, *The Prince Of Poets And Most Illustrious Of Philosophers* (London: Gay and Hancock, Ltd, 1926); F. L. Woodward, *Francis Bacon And The Cipher Story* (Adyar, Madras, 1932); A. B. Cornwall, *Francis The First Unacknowledged King Of Great Britain And Ireland* (Birmingham: Cornish Brothers Ltd., 1936); Alfred Dodd, *The Marriage Of Elizabeth Tudor* (London: Rider and Co., 1940); James Arthur, *A Royal Romance* (Adyar, Madras: The Theosophical Publishing House, 1941); Comyns Beaumont, *The Private Life Of The Virgin Queen* (London: Comyns (Publishers) Ltd, 1947); Peter Dawkins, *Dedication To The Light, The Bardic Mysteries The Love Affair of Elizabeth I and Leicester The Birth and Adoption of Francis Bacon* (Francis Bacon Research Trust, 1984); Jean Overton Fuller, *Francis Bacon A Biography* (London and The Hague: East-West Publications, 1981); Alfred Dodd, *Francis Bacon's Personal Life-Story* (London: Rider & Company, 1986); Ross Jackson, *Shaker Of The Speare The Francis Bacon Story* (Sussex: Book Guild Publishing, 2005); Virginia M. Fellows, *The Shakespeare Code* ((Snow Mountain Press, 2006); Lochithea, *Sir Francis Bacon's Journals The Rarest of Princes* (New York: iUniverse, Inc, 2007); Deslie McClellan, *Prince of Our Dreams* (Emmaus, Pennsylvania, Playhouse Books, 2011); William T. Smedley, 'The Mystery Of Francis Bacon', *Baconiana*, Vol. IX, No 33 (Third Series) January, 1911 (London: Gay & Hancock, Limited), pp. 5-

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564. A. Phoenix, 'Francis Bacon And The Law In His Early Shakespeare Plays Reflected In His Life And Acknowledged Writings' (2021), pp. 1-81; A. Phoenix, 'Francis Bacon (Bassanio/Bellario) And Anthony Bacon (Its Titular Character Antonio) And *The Merchant of Venice*' (2021), pp. 1-43; A. Phoenix, 'Francis Bacon, 'The God-like Figure Of Duke Vincentio, And The Unpublished Speeches Of Lord Keeper Sir Nicholas Bacon, In *Measure for Measure*' (2021), pp. 1-48; A. Phoenix, 'Francis Bacon And His Earliest Shakespeare Play *Hamlet* A Tudor Family Tragedy' (2021), pp. 1-109. All the above articles are available at www.sirbacon.org/francisbaconsociety.co.uk.
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631. William F. Friedman, *An Introduction to Methods for the Solution of Ciphers* (Riverbank Laboratories, Department of Ciphers, Riverbank, Geneva, Illinois, 1918) reprinted in *The Riverbank Publications Volume I* (Laguna Hills, California: published by Aegean Park Press, 1979), pp. 3-5.
632. William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), p.173 and William F. Friedman and Elizebeth S. Friedman, 'The Cryptologist Looks At Shakespeare', 1955, Original Typescript held at the Folger Shakespeare Library, p. 409.

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634. A. Phoenix, 'The Secret, Hidden, And Obscured, Relationship Between Francis Bacon And The Jaggards, Printers And Publishers Of His Essays And The First Folio Of The Shakespeare Works' (2021), pp. 1-51, available online at both www.sirbacon.org/francisbaconsociety.co.uk.
635. William F. Friedman and Elizebeth S. Friedman, 'The Cryptologist Looks At Shakespeare', 1955, Original Typescript held at the Folger Shakespeare Library, pp. 399-400; William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), p.170.
636. Frank Woodward, *Francis Bacon's Cipher Signatures* (London: Grafton and Co., 1923), p. 8.
637. Francis Bacon, *The Two Bookes Of the proficience and aduancement of Learning, diuine and humane* (London: printed for Henry Tomes, 1605), pp. 60-1.
638. William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), p.171; William F. Friedman and Elizebeth S. Friedman, 'The Cryptologist Looks At Shakespeare', 1955, Original Typescript held at the Folger Shakespeare Library, pp. 402-3.
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640. Francis Bacon, *Of The Advancement And Proficience Of Learning: Or The Partitions Of Sciences IX Bookes. Written in Latin by the most Eminent, Illustrious and Famous Lord Francis Bacon Baron of Veurlam, Viscount St. Alban, Counsellour of Estate and Lord Chancellor of England. Interpreted by Gilbert Wats* (London: printed for Thomas Williams, 1674), p. 170.
641. Frank Woodward, *Francis Bacon's Cipher Signatures* (London: Grafton and Co., 1923), p. 8 and William F. Friedman and Elizebeth S. Friedman, 'The Cryptologist Looks At Shakespeare', 1955, Original Typescript held at the Folger Shakespeare Library, p. 402.
642. William F. Friedman and Elizebeth S. Friedman, 'The Cryptologist Looks At Shakespeare', 1955, Original Typescript held at the Folger Shakespeare Library, pp. 402-3.
643. Frank Woodward and Parker Woodward, *Secret Shakespearean Seals Revelations Of Rosicrucian Arcana Discoveries In The Shakespeare Plays, Sonnets, And Works, Printed Circa 1586-1740, Of "Secreti Sigilli," Concealed Author's Marks And Signs* (Nottingham: H. Jenkins, 1916), pp. 27-8.
644. Frank Woodward, *Francis Bacon's Cipher Signatures* (London: Grafton and Co., 1923), pp. 8-11.
645. Editorial Notes, *Baconiana*, Vol. XXX. No. 120, July 1946, p. 86.
646. STC 194.
647. Thomas Powell, ed., *The Repertorie Of Records Remaining in The 4 Treasuries*

on the Receipt side at Westminster. The two Rembrancers of the Exchequer. With A briefe introductive Index of the Records of the Chancery and Tovver: Whereby to giue the better Direction to the Records abouesaid. As also, A most exact Calendar of all those Records of the Tovver: In which, are contayned and comprised whatsoever may give satisfaction to the Searcher, for Tenure or Tytle of any thing (London: printed by B. Alsop and T. Fawcet fro B. Fisher, 1631), To the Reader, A4v.

648. Ibid., A3r-v.
649. Ibid., A4r.
650. Ibid., pp. 33-4.
651. Ibid., p. 85.
652. Ibid., pp. 88-9.
653. Thomas Powell, *The Attourneys Academy* (London: printed for Benjamin Fisher, 1623), A1r.
654. William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), p. 172.
655. Ibid., p. 97; Walter Conrad Arensberg, *The Cryptography Of Shakespeare* (Los Angeles: Howard Bowen, 1922), pp. 6-10.
656. William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), p. 92.
657. This acrostic poem to Sir Francis Walsingham is reproduced by Walter Conrad Arensberg, *The Cryptography Of Shakespeare* (Los Angeles: Howard Bowen, 1922), pp. 6-7; Henry Seymour, 'Bacon's Secret Signature To Contemporary Plays', *Baconiana*, Vol. XIX, No 72, (Third Series), July 1927, p. 30; William F. Friedman and Elizebeth S. Friedman, 'The Cryptologist Looks At Shakespeare', 1955, Original Typescript held at the Folger Shakespeare Library, p. 179; William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), pp. 96-7. Robert Hutchinson, *Elizabeth's Spy Master Francis Walsingham and the Secret War that Saved England* (London: Weidenfeld & Nicolson, 2006), inside page; see also John Cooper, *The Queen's Agent* (New York and London: Pegasus Books, 2013), pp. 324-5.
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659. Henry Seymour, 'Bacon's Secret Signature To Contemporary Plays', *Baconiana*, Vol. XIX, No 72, (Third Series), July 1927, p. 30.
660. Spedding, *Works*, VI, pp. 519-20; Brian Vickers, ed., *Francis Bacon A Critical Edition Of The Major Works* (Oxford University Press, 1996), pp. 454-6/784-5; Michael Kiernan, ed., *The Essayes or Counsels, Civill and Morall* (Oxford Clarendon Press, 2000), pp.177-8/314-5.
661. William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed*

- To Him* (Cambridge University Press, 1958), p. 112.
662. It is pointed out by Andrew Sofer in 'All's I-L-L That Starts "I'Le": Acrostic space and Ludic Reading in the Margins of the Early Modern Play-Text', *Renaissance Drama*, 48 (2020), that the anonymous author of *The Arte of English Poesie* (whom he mistakenly takes to be George Puttenham) 'is the first writer to use the word anagram'. The work is available online see note 25.
663. Edward Arber, ed., *The Arte of English Poesie* (London: 1869), p. 4.
664. *Ibid.*, p. 3.
665. Anon., *The Arte Of English Poesie. Contruiued into three Bookes: The first of Poets and Poesie, the second of Proportion, the third of Ornament* (London: printed by Richard Field, 1589), B3r.
666. Edward Arber, ed., *The Arte of English Poesie* (London: 1869), Book 1, p. 37.
667. Walter Begley, *Bacon's Nova Resuscitatio Or the Unveiling of his Concealed Works and Travels* (London: Gay and Brid, 1905), I, pp. 1-80. See also William Booth, *Some Acrostic Signatures Of Francis Bacon* (London: Archibald Constable & Co., Limited, 1909), pp. 94-112, 120-3.
668. The Friedmans mention the name Puttenham once throughout their work see William F. Friedman and Elizebeth S. Friedman, *The Shakespearean Ciphers Examined An Analysis Of Cryptographic Systems Used As Evidence That Some Other Author Than William Shakespeare Wrote The Plays Commonly Attributed To Him* (Cambridge University Press, 1958), p. 177 'A profusion of Baconian pseudonyms emerge, including, Puttenham, Green, Peele, Soenser and Marlowe ...' and see also p. 132 'For good measure he added Webster's *Arte of Poesie* to the list (the work is enormously popular among Baconians).'
669. Walter Begley, *Bacon's Nova Resuscitatio Or the Unveiling of his Concealed Works and Travels* (London: Gay and Brid, 1905), I, p. 2.
670. Anon., *The Arte Of English Poesie. Contruiued into three Bookes: The first of Poets and Poesie, the second of Proportion, the third of Ornament* (London: printed by Richard Field, 1589), p. 257.
671. William Lowes Rushton, *Shakespeare And 'The Arte Of English Poesie'* (Liverpool: Henry Young & Sons, 1908), p. 1.
672. *Ibid.*, p. 167.
673. Edward Arber, ed., *The Arte of English Poesie* (London: 1869), Book II, p. 117.
674. *Ibid.*, p. 121.
675. *Ibid.*, pp. 122-3
676. *Ibid.*, pp. 123-4.
677. Christopher B. Ricks, 'Shakespeare and the Anagram', *Proceedings of the British Academy*, 151 (2007), pp. 111-46; Alastair Fowler, "Anagrams", *Yale Review*, 95 (2007), pp. 33-43; R. H. Winnick, "'Loe, here in one line is his name writ twice": Anagrams, Shakespeare's Sonnets, and the Identity of the Fair Friend', *Literary Imagination*, 11 (2009), pp. 254-77; Alastair Fowler, *Literary Names Personal Names in English Literature* (Oxford University Press, 2012); William Bellamy, *Shakespeare's Verbal Art* (Cambridge Scholars Publishing, 2015); William Bellamy, 'Ben Jonson and the Art of Anagram', *Academia*, pp. 1-52; Martin Dodsworth, 'The Elizabethan Anagram and Shakespeare's Sonnets', *The Review of English Studies*, 68 (2017), 666-88; Andrew Sofer 'All's I-L-L That Starts "I'Le": Acrostic Space and Ludic Reading in the Margins of the Early Modern Play-Text', *Renaissance Drama*, 48 (2020).
678. Alastair Fowler, *Literary Names Personal Names in English Literature* (Oxford University Press, 2012), p. 87.

679. R. H. Winnick, “‘Loe, here in one line is his name writ twice’: Anagrams, Shakespeare’s Sonnets, and the Identity of the Fair Friend’, *Literary Imagination*, 11 (2009), pp. 254-77. I have used the unnumbered online article so for the convenience of the reader I will give its specific or closest reference number in the paper, n. 6.
680. Helen Vendler, *The Art of Shakespeare’s Sonnets* (Harvard University Press, 1997), p. 32.
681. R. H. Winnick, “‘Loe, here in one line is his name writ twice’: Anagrams, Shakespeare’s Sonnets, and the Identity of the Fair Friend’, *Literary Imagination*, 11 (2009), n. 8.
682. Ibid., n. 9.
683. A. Phoenix, ‘Francis Bacon And His First Unacknowledged Shakespeare Play The Misfortunes Of Arthur And Its Extensive Links To A Whole Range of His Other Shakespeare Plays’, pp.1-13 www.sirbacon.org/francisbaconsociety.co.uk.
684. Spedding, *Letters and Life*, III, pp. 75-6.
685. R. H. Winnick, “‘Loe, here in one line is his name writ twice’: Anagrams, Shakespeare’s Sonnets, and the Identity of the Fair Friend’, *Literary Imagination*, 11 (2009), n. 39.
686. Ibid., n. 9.
687. Ibid., n. 29.
688. Ibid., n. 33.
689. Ibid., n. 34.
690. Ibid., n. 47.
691. Andrew Sofer ‘All’s I-L-L That Starts “I’Le”’: Acrostic Space and Ludic Reading in the Margins of the Early Modern Play-Text’, *Renaissance Drama*, 48 (2020), I have used the unnumbered online article so for the convenience of the reader I will give its specific or closest reference number in the paper, n. 22. In *Literary Names Personal Names in English Literature* (Oxford University Press, 2012), pp. 77, 235 Professor Fowler provides definitions of an acrostic and an anagram:

Acrostic: a device whereby the letters of a name or other words are dispersed according to a regular pattern, often as the first letters of successive verses (INITIAL ACROSTIC). Other options include the last letters (TELESTICH), first and last letters (DOUBLE ACROSTIC), the first letters after caesuras (MEDIAL ACROSTIC), etc. Acrostics may be thought of as special instances of DISPERSED ANAGRAM: like the anagram, an acrostic may be open-displayed typographically- or hidden.

Authorship might also be affirmed through an acrostic...

In the later Middle Ages and Renaissance, acrostics were so common that educated readers seem to have traced them almost at sight. Writers such as Francois Villon (1431-after 1463), Francesco Colonna (1433/4-1527), and Palingenius (Pier Angelo Manzolia) (c.1500-c.1543) still signed their works acrotically. A prominent English example is John Gower, who gives his acrostic signature in a prologue to book I of *Vox Clamantis*.

Anagram: words within words. A device whereby the letters or syllables of a word or phrase are rearranged or else dispersed within a larger text. Used to link a name with satiric or eulogistic comment on it (e.g. MARGARET THATCHER: THAT GREAT CHAMBER). Sometimes combined with ACROSTIC or REBUS.

Anagrams may be CONDENSED (rearranged within a short text or DISPERSED among other letters). Anagrams may be openly displayed or concealed (as when embedded in a longer text).

692. Andrew Sofer 'All's I-L-L That Starts "I'Le": Acrostic Space and Ludic Reading in the Margins of the Early Modern Play-Text', *Renaissance Drama*, 48 (2020), ns. 46 & 51.
693. Ibid., n. 65.
694. Ibid., n. 67
695. Ibid., n. 69.
696. William Bellamy, *Shakespeare's Verbal Art* (Cambridge Scholars Publishing (2015), p. 1.
697. Ibid., p. 2.
698. Alastair Fowler, *Literary Names Personal Names in English Literature* (Oxford University Press, 2012), p. 82.
699. Ibid., p. 84.
700. Ibid., p. 87.
701. William Shakespeare, *Venus And Adonis* (London: printed by Richard Field, 1593), dedication 'To The Right Honorable Henrie Wriothesley, Earle of Southampton, and Baron of Titchfield', signed 'William Shakespeare'.
702. Walter Begley, *Is It Shakespeare? The Great Question Of Elizabethan Literature. Answered In The Light Of New Revelations And Important Contemporary Evidence Hereto Unnoticed* (London: John Murray, 1903), pp. 12-31; Basil E. Lawrence, *Notes On the Authorship Of The Shakespeare Plays And Poems* (London: Gay and Hancock Ltd, 1925), pp. 76-107. William Stone Booth, *Subtle Shining Secrecies* (Boston: Walter H. Baker, 1925), pp.55-7; Arden, 'Acrostics and Quibbles', *Baconiana*, Vol. XLII, No. 159, December, 1958, p.105.
703. William Shakespeare, *A Pleasant Conceited Historie, called The taming of a Shrew. As it was sundry times acted by the Right honourable the Earle of Pembroke his seruants* (London: printed by Peter Short for Cuthbert Burby, 1594), A2r.
704. A. Phoenix, 'An Unrecognised Francis Bacon Manuscript Written In The Hand Of The Bacon Family Scribe Petruccio Ubaldini, The Model For Petruccio In The Taming Of The Shrew, Whose Father In The Play Is Antonio, And Where Two Of His Household Servants Are Named Nicholas And Nathaniel, The Christian Names Of Anthony, Nicholas And Nathaniel Bacon', pp. 1-48, available at both www.sirbacon.org/francisbaconsociety.co.uk.
705. See for example Francis Griffin Stokes, *A Dictionary Of The Characters & Proper Names In The Works Of Shakespeare* (London: G. Harrup & Company Ltd, 1924); J. Madison Davis and A Daniel Frankforter, *The Shakespeare Name Dictionary* (New York & London, Garland Publishing, Inc., 1995); Alastair Fowler, *Literary Names Personal Names in English Literature* (Oxford University Press, 2012), 'Shakespeare's Names', pp. 101-24.
706. William Stone Booth, *Subtle Shining Secrecies* (Boston: Walter H. Baker, 1925), p. 165. For a discussion see A Phoenix, 'Francis Bacon And The Law In His Early Shakespeare Plays Reflected In His Life And Acknowledged Writings', (2021), pp. 32-48 at www.sirbacon.org/francisbaconsociety.co.uk.
707. William Stone Booth, *Subtle Shining Secrecies* (Boston: Walter H. Baker, 1925), p. 100.

708. Ibid., p. 102.
709. Rob Fowler 'Light of Truth' and Yann Le Merlus 'Allisnum2er', 'Baconian Acrostics, Anagrams, Monograms, & Secret Signatures, in the Shakespeare Poems and Plays', 24/04/2022, at www.sirbacon.org.
710. William Stone Booth, *Subtle Shining Secrecies* (Boston: Walter H. Baker, 1925), p. 196.
711. Ibid., p. 202.
712. William Shakespeare, *The Tragedie of King Richard the third* (London: printed by Thomas Creede for Andrew Wise, 1598), A2r.
713. Yann Le Merlus 'Allisnum2er', 'Baconian Acrostics, Anagrams, Monograms, & Secret Signatures, in the Shakespeare Poems and Plays', 11/03/2022, at www.sirbacon.org.
714. Frank J. Burgoyne, ed., *Collotype Facsimile & Type Transcript Of An Elizabethan Manuscript Preserved at Alnwick Castle, Northumberland* (London: Longmans, Green, and Co., 1904), p. xx. See also James Spedding, ed., *A Conference Of Pleasure, Composed For Some Festive Occasion About The Year 1592 By Francis Bacon. Edited, From A Manuscript Belonging To The Duke of Northumberland* (London: printed by Whittingham and Wilkins, 1870), pp. xxii-xxvi.
715. William Shakespeare, *The Tragedie of King Richard the se-cond* (London: printed by Valentine Simmes for Andrew Wise, 1597), A2r.
716. William Stone Booth, *Subtle Shining Secrecies* (Boston: Walter H. Baker, 1925), pp. 170, 176.
717. William Shakespeare, *The History Of Henrie The Fourth; With the battell at Shrewsburie, betweene the King and Lord Henry Percy, surnamed Henrie Hotspur of the North. With the humorous conceits of Sir Iohn Falstalffe* (London: printed by P. S. for Andrew Wise, 1598).
718. William Stone Booth, *Subtle Shining Secrecies* (Boston: Walter H. Baker, 1925), p. 179.
719. Alan Stewart with Harriet Knight, *Early Writings 1584-1596* (Oxford Clarendon Press, 2012), pp. 165, 252-4, 283, 357, 407, 578, 598.
720. Constance M. Pott, *The Promus Of Formularies And Elegances (Being Private Notes, circ. 1594, hitherto unpublished) By Francis Bacon Illustrated and Elucidated By Passages From Shakespeare* (London: Longmans, Green and Co., 1883), passim and N. B. Cockburn, *The Bacon Shakespeare Question The Baconian theory made sane* (Guildford and Kings Lynn: Biddles Limited, 1998), pp. 509-47.
721. Michael Kiernan, ed., *The Essayes or Counsels, Civill and Morall* (Oxford Clarendon Press, 2000), pp. 17, 49, 124, 130, 155, 164, 178.
722. Spedding, *Works*, VI, pp. 335-45. See also Michael Kiernan, ed., *The Advancement of Learning* (Oxford Clarendon Press, 2000), passim and Michael Kiernan, ed., *The Historie of the raigne of King Henry the seventh and other workes of the 1620s* (Oxford Clarendon Press, 2012), passim.
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730. Alfred Dodd, *Francis Bacon's Personal Life-Story* (London: Rider and Company, 1986), p. 42; Jean Overton Fuller, *Francis Bacon A Biography* (London and The Hague: East-West Publications, 1981), pp. 25, 26n1.
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735. A. Phoenix, 'The Secret, Hidden, And Obscured, Relationship Between Francis Bacon And The Jaggards, Printers And Publishers Of His Essays And The First Folio Of The Shakespeare Works' (2021), pp. 1-51, pp. 25-9, available online at www.sirbacon.org/francisbaconsociety.co.uk.
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750. *Shakespeares Comedies Histories, & Tragedies. Published according to the True Originall Copies* (London: printed by Isaac Jaggard and Edward Blount, 1623), 'To the memory of my beloued, The Avthor Mr. William Shakespeare'.
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752. This was first discovered by Miss Annette Covington of Cincinnati in 1931 and was reported in the now defunct local afternoon newspaper *The Cincinnati Times-Star* in Ohio on 19 March 1931 and afterwards reproduced in *The Ladies Guild of Francis St. Alban*, Vol. 33 August 1931, pp. 854-5. This explosive and decisive evidence has either remained unknown to the schoolmen and orthodox Shakespeare scholars or systematically suppressed by them for nigh on a century.
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